United States. The United States concurs in this position.

In the course of our preparation of Findings of Fact and Conclusions of Law we have reviewed and disposed of the motions to which the parties have taken exception in the light of the evidence before us.

THE PARTIES

Identification of the parties to these actions and statement of their positions will clarify our views. The parties in the interpleader suits, KC-1945, KC-1946, KC-1947, KC-1948, KC-1969, and KC-1980 all claim ownership of or an interest in the interpleader fund in the particular case.

KC-1945.

Cities Service Gas Company was the original interpleading plaintiff in Cases KC-1945, KC-1948. It was subsequently joined, however, by Cities Service Helex, Inc., and Cities Service Cryogenics, Inc. (formerly Cities Service Helium, Inc.) both wholly owned subsidiaries of Cities Service Company, which holds, also, upwards of 79 per cent of the stock of Cities Service Gas Company. These plaintiff corporations are organized under the laws of the State of Delaware and have principal places of business in Oklahoma.

It is necessary to state the contractual relationships between the three parties plaintiff. In brief, Cities Service Gas Company conveyed to Cities Service Helium by contract executed August 17, 1961, "for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable considerations" the right to all helium contained in gas purchased by it and gathered to a central

point adjacent to its Grant County, Kansas compressor station, together with the right to extract such helium.[3] Cities Service Helium in turn, by contract dated the following day, August 18, 1961, conveyed these helium rights to Cities Service Helex, Inc., which agreed to pay therefor 1.35 cents for each thousand cubic feet (Mcf) of gas delivered to Cities Service Helex for helium processing.[4] Shortly thereafter, on August 22, 1961, Cities Service Helex contracted to sell helium to the United States.[5]

Cities Service Helex contracted with the Cities Service Gas Company, on September 11, 1961, for the purchase of gas required for operation of its helium extraction plant, and agreed to sell to the Cities Service Oil Company the crude liquid hydrocarbons recovered in the helium extraction process.[6] Cities Service Gas Company is referred to as "Cities."

The named defendant individuals, O. W. Heger, Almeta Redfield, et al., appear individually and as representatives of a landowner class consisting of

> "the persons, firms and corporations owning a mineral interest in land from which helium has been, is being or will be severed from the ground in connection with or because of production under oil and gas leases, which helium has been, is being or will be taken into the possession by the United States of America in Grant County, Kansas, at the delivery point described in that certain contract between

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[3] LPX 150.
[4] LPX 151.
[5] LPX 106.
[6] LPX 152; LOX 508.

the United States of America and plaintiff in interpleader Cities Service Helex, Inc., dated August 22, 1961."[7]

The named defendant lessee-producer is Mobil Oil Corporation (formerly Socony Mobil Oil Company), a corporation organized under the laws of the State of New York, with its principal place of business there. Mobil appears both individually and as representative of a lessee-producer class, which

"... consists of the persons, firms and corporations denominated 'lessee-producers,' who are the owners of leasehold interests in ... oil and gas leases [described in the foregoing paragraph] ..., and who deliver, have delivered or will deliver helium contained in gaseous streams directly or indirectly to Cities Service Gas Company, which helium has been, is being, and will be removed and delivered by plaintiff in interpleader, Cities Service Helex, Inc., into the possession of the United States of America at the delivery point described in that certain contract between the United States of America and Cities Service Helex, Inc., dated August 22, 1961."[8]

Cities purchases gas from Mobil pursuant to at least four contracts which are filed as rate schedules of Mobil with the Federal Power Commission.[9] Whether gas delivered under all of these contracts is processed for helium does not clearly appear.[10] Representative lease forms under which Mobil produces gas for sale to Cities are in evidence.[11]

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[7] Dkt. 1135, KC-1969. In the documentation of the finding "Dkt. ....." followed by case number refers to the docket sheet prepared by the Clerk of the Court for each case; however, after consolidation most pleadings were filed in KC-1969, as the Consolidated file.

[8] Ibid.

[9] Mobil Exs. 11, 12, 13 and 14, being FPC Schedule No. 3, 89, 261 and 262.

[10] Tr. 34:3482-83.

[11] Mobil Ex. 1; Dkt. 217, KC-1969.

KC-1946.

The plaintiffs are identical with those in the preceding case. The named individual defendants, Vivian W. Schuett, R. J. Stuckey, et al., appear both individually and as representatives of the class of landowners and owners of mineral interests as defined in the preceding case. The named defendant lessee-producer is the Ashland Oil and Gas Company, a corporation organized and existing under the laws of the Commonwealth of Kentucky, with its principal place of business in that state. Ashland appears both individually and as representative of the same class of leasehold interest owners as defined in the preceding case, KC-1945.

Ashland produces gas from a block of 119 wells located principally in Grant and Haskell counties, Kansas, and delivers it through an approximately 150-mile gathering system to Cities at a point near the helium extraction plant operated by Cities Service Helex, Inc., in Grant County, Kansas. Representative forms of these leases under which gas is produced for this sale are compiled in Ashland Exhibit 1. These leases were acquired by Ashland on March 1, 1963, from the United Carbon Company, parent of United Producing Company, a previous owner thereof.[12]

The contract under which Ashland delivers gas to Cities was executed originally on March 12, 1948, by United Producing Company, which agreed therein to deliver natural gas to Cities so long as it could be produced from the subject leaseholds in commercial quantities.[13] On October 1, 1965, this contract was filed with the Federal Power Commission

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[12] Ashland Ex. 18-20.
[13] Ashland Ex. 5.

as United's FPC Rate Schedule No. 111, and upon acquisition of the leaseholds by Ashland, and FPC approval of the transfer, it became Ashland's FPC Rate Schedule No. 111. Ashland also succeeded to a second gas purchase contract with Cities executed August, 1953, by United now being Ashland's FPC Rate Schedule No. 112. Gas delivered under this contract is not processed for the separation of helium, however.[14]

KC-1947.

The plaintiffs are identical with those in each of the preceding cases. The named defendant individuals, Katherine R. Adams, J. H. McMorran, et al., appear individually and as representatives of the class of landowners and owners of mineral interests as defined in the first case, KC-1945. The named lessee-producer is Columbian Fuel Corporation organized under the laws of the State of Delaware, with its principal place of business in the State of New York. Columbian appears individually and as representative of the class of leasehold interest owners defined in the first case, KC-1945.

Columbian sells natural gas to Cities Service Gas under two contracts, executed November 18, 1949, and June 16, 1949.[15] These contracts are filed with the Federal Power Commission, and are included in Columbian's FPC Rate Schedule Nos. 7 and 37. Columbian delivers gas to Cities under a third contract, its FPC Rate Schedule No. 10, but gas delivered thereunder apparently is not processed for

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[14] Tr. 34:3461.
[15] Columbian Exs. 8,9.

helium extraction.[16] Columbian delivers gas to Cities at the tailgate of Mobil's Hickock Plant in Grant County, Kansas.

KC-1948.

The plaintiffs are identical with those in each of the preceding cases. The named defendant individuals, Bloyd Burgess, John J. Cecil, et al., appear individually and as representatives of the class of landowners and owners of mineral interests as defined in the first case, KC-1945. The named defendant lessee-producer is the Pan American Petroleum Corporation, organized under the laws of the State of Delaware, with its principal place of business in the State of Oklahoma. Pan American appears individually and as representative of the class of leasehold interest holders as defined for the first case, KC-1945.

Pan American sells gas to Cities under a single contract executed June 23, 1950, by Stanolind Oil and Gas Company, Pan American's predecessor, the contract covering gas produced from approximately 400,000 to 600,000 acres in Kansas Hugoton Field so long as it can be had in commercial quantities. This contract as amended is included in Pan American's FPC Rate Schedule No. 84.[17] Copies of representatives lease forms under which this gas is produced are in evidence.[18]

Since execution of this contract in 1950, Pan American has executed approximately 168 "farmout" agreements, by which it agreed to assign various leases covering areas dedicated under that contract, these agreements providing specifi-

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[16] Columbian Ex. 10.
[17] Pan American Ex. 4.
[18] Pan American Ex. 1.

cally that any production therefrom is subject to the Pan American—Cities contract. Under the standard farmout agreement, the farmout operator drills at his own expense, and upon completion of a commercial well, he becomes owner of the working interest and usually operates the well or arranges for its operation, the assignor retaining a royalty. These operators are independent producers who were required to obtain certificates of public convenience and necessity covering their sales to the Cities Service Gas Company. None of these operators was made a party to this action. By court order they fall within the class of owners of leasehold interests represented by Pan American as a lessee-producer.[19]

KC-1969.

Plaintiffs in this interpleader action are Northern Natural Gas Company (Northern), an interstate pipeline company, and two wholly-owned subsidiaries, Northern Helex Corporation (formerly Helex, Inc.) and Northern Natural Gas Products Company, all corporations organized under the laws of the State of Delaware, with their principal places of business in the State of Nebraska.

The named defendant individuals, Ralph Grounds, Henry Hitch, and approximately five hundred other named individuals, appear individually and as representatives of a class defined by the court as comprising

> ". . . the persons, firms and corporations owning a mineral interest in land from which helium has been, is being or will be severed from the ground in connection with or because of production under oil and gas leases, which helium, is being or will be taken into the possession by the United States of America in Ellsworth County, Kansas at the delivery

[19] Page 13, infra.

point described in that certain contract between the United States of America and plaintiff in interpleader Northern Helex, Inc. (formerly Helex Company), dated August 15, 1961."[20]

Eight named lessee-producer companies are defendants in this action.

Ashland delivers natural gas to Northern under two contracts, executed August 25, 1943, and June 28, 1954, these are included in Ashland's FPC Rate Schedule Nos. 116 and 122, respectively.[21]

Cities Service Oil, a Delaware corporation with its principal place of business in the State of Oklahoma, delivers natural gas to Northern under eleven contracts, these being Cities Service Oil FPC Rate Schedule Nos. 53, 70, 89, 166-171, 190, and 191.[22]

Gulf Oil Corporation, a Pennsylvania corporation with its principal place of business there, delivers natural gas to Northern under a single contract, found in Gulf's FPC Rate Schedule No. 117.[23] Representative forms of leases under which this gas is produced are in evidence.[24]

Helmerich & Payne, Inc., is an Oklahoma corporation with its principal place of business in that state. It delivers natural gas to Northern under eight contracts, these being its FPC Rate Schedule Nos. 1, 2, 4-8.[25] Representative

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[20] Dkt. 1135, KC-1969.
[21] Ashland Exs. 7, 10.
[22] Cities Service Oil Exs. 7-16. Representative forms of leases under which gas is produced for delivery to both Northern and Panhandle Eastern Pipeline Company, a party to KC-1980, are assembled in Cities Service Oil Co. Ex. 17.
[23] Gulf Ex. 3.
[24] Gulf Exs. 1, 2; Dkt. 166, 920, KC-1969.
[25] Helmerich & Payne Exs. 3-9.

forms of leases under which gas is produced for delivery thereunder are also in evidence.[26]

Mapco Production Company, a Delaware corporation with its principal place of business in Oklahoma, delivers gas to Northern under one contract, dated September, 1949, and is Mapco FPC Rate Schedule No. 1, formerly Hugoton Plains FPC Schedule No. 1. Representative forms of leases under which gas is produced for delivery under this contract are in evidence.[27]

Mobil delivers gas to Northern under nine contracts, included in its FPC Rate Schedule Nos. 32, 71, 85, 158, 179, 281, 232, 284, and 326.[28] Representative forms of leases are in evidence.[29]

Texaco, a Delaware corporation with its principal place of business in states other than Kansas and Nebraska, delivers gas to Northern under fourteen contracts, these are included in Texaco FPC Rate Schedule Nos. 10, 11, 12, 71, 106-112, 129, 147 and 317. Representative lease forms under which gas is produced for these sales are in evidence.[30]

These named lessee-producers appear individually and as representatives of a class defined by the court as consisting of:

> "... the persons, firms and corporations denominated 'lessee-producers' who are the owners of leasehold interests in the oil and gas leases . . [from which gas is produced for delivery to Northern Natural Gas Company] and who de-

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[26] Helmerich & Payne Exs. 1, 2; Dkt. 250, 1232, 1235, KC-1969.
[27] Mapco Ex. 1; Dkt. 255, KC-1969.
[28] Mobil Exs. 2-9.
[29] Mobil Exs. 1, 1A.
[30] Texaco Exs. 1, 2; Dkt. 199, 1231, KC-1969 (Leases); Texaco Exs. 3-14, 17 and 33.

liver, have delivered or will deliver helium contained in gaseous streams directly or indirectly to Northern Natural Gas Company, which helium has been, is being or will be removed and delivered by plaintiff in interpleader [Northern Helex, Inc.], into the possession of the United States of America at the delivery point described in that certain contract between the United States and [Northern Helex, Inc.] (formerly Helex Company), dated August 15, 1961."[31]

Phillips Petroleum Company, a Delaware corporation with its principal place of business in the State of Delaware, was named as an original defendant lessee-producer of gas. Phillips, however, makes no claim to the interpleaded fund, and urges that having disclaimed any interest in the subject matter of the action upon which the court's jurisdiction depends, it should be dismissed therefrom.

Counsel for landowners and Phillips disagree whether the landowners assert cross-claims against Phillips in KC-1969. After examination of the pleadings and pre-trial order, we find that landowners have asserted two cross-claims against Phillips; first, a denial that Phillips has any interest in the fund (which Phillips concedes) and secondly, on the premise that leases do cover helium, landowners seek damages from Phillips on the ground that as a lessee-producer, it has failed to market the helium portion of natural gas with reasonable diligence.

KC-1980.

The plaintiff in this interpleader action is National Helium Corporation, organized and existing under the laws of the State of Delaware, with its principal place of business in the State of Kansas.

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[31] Dkt. 1135, KC-1969.

The Panhandle Eastern Pipe Line Company, a Delaware corporation with its principal place of business in the State of Missouri, was made a party defendant by National Helium. Panhandle owns fifty per cent of the stock of National Helium, with National Chemical and Distillers Company owning the remaining fifty per cent.

No lessee-producer was named as an original defendant in this case. Eight named lessee-producers were first introduced into this case by a third-party complaint filed by defendant Panhandle,[32] wherein Panhandle sought judgment against the named third-party defendants "for all sums that may be adjudged against Panhandle in favor of National Helium or the landowners with respect to gas purchased by Panhandle from, and delivered to Panhandle by such third-party defendants . . ." Prior to that time, landowners had filed counterclaims and crossclaims against National Helium and Panhandle respectively, seeking judgment for alleged conversion of helium. National Helium had never asserted any liability against Panhandle, however, so as to authorize a third-party complaint under Rule 14, F.R.Civ.P., which provides that a "defending party, as a third-party plaintiff, may cause a summons and complaint to be served upon a person not a party to the action *who is or may be liable to him for all or part of the plaintiff's claim against him.*" [Emphasis supplied.]

The lessee-producers answered without objecting to improper joinder under Rule 14. They have tendered precisely the same issues for decision in KC-1980 as in the other interpleader cases where they were properly joined, and they

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[32] Dkt. 54, KC-1980.

have taken precisely the same positions in each of the interpleader cases. Had lessee-producers not asserted their claims to the fund in KC-1980, notwithstanding their third-party status, it would have been incumbent upon the court to join them as defendants under Rule 19, F.R.Civ.P. which provides, in pertinent part, that

> "A person who is subject to service of process and whose joinder will not deprive the court of jurisdiction over the subject matter of the action shall be joined as a party in the action if . . . (2) he claims an interest relating to the subject of the action and is so situated that the disposition of the action in his absence may . . . (ii) leave any of the persons already parties subject to a substantial risk of incurring double, multiple, or otherwise inconsistent obligations by reason of his claimed interest. If he has not been so joined, the court shall order that he be made a party."

It is clear that as a group, their presence was necessary to a full and complete adjudication of rights to the interpleaded fund. Failure to join them would have left a critical gap in the group of claimants necessary to a complete determination of the ownership of helium, and the right to participate in the fund consisting of the proceeds from its sale. We hold that the lessee-producers named in the third-party complaint are properly defendants, individually and as representatives of the class, and we deem them to have been joined under Rule 19. The named lessee-producer defendants are twelve in number.

Ashland delivers gas to Panhandle under eleven contracts, included in Ashland's FPC Rate Schedule Nos. 108, 109, 120, 121, 125, 135, 141, 142, 145, 148 and 177.[33]

Cabot Corporation, a Delaware corporation with its prin-

[33] Ashland Exs. 3, 4, 8, 9, 11-17.

cipal place of business in Massachusetts, delivers natural gas to Panhandle under eleven contracts, included in its FPC Rate Schedule Nos. 28, 35, 47, 69, 71, 41, 62, 75, 89, 33, and 66.[34]

Columbian delivers gas to Panhandle under seven contracts, these included in Columbian's FPC Rate Schedule Nos. 2, 31, 33, 36, 40, 75, and 136.[35]

The Shamrock Oil and Gas Corporation, since the commencement of this litigation, has become, as result of a merger, the Diamond Shamrock Corporation, and has been substituted therefor. It is a Delaware Corporation, with its principal place of business in the State of Ohio. It delivers gas to Panhandle under four contracts, these included in Shamrock's FPC Rate Schedule Nos. 4, 24, 30 and 32.[36]

The Dorchester Gas Producing Company, a Delaware corporation with its principal place of business in the State of Texas, delivers gas to Panhandle under three agreements, two of which are gas exchange agreements, included in Dorchester's FPC Rate Schedule Nos. 4, 1 and 2.[37]

Gulf delivers gas to Panhandle under eight contracts, being Gulf's FPC Rate Schedule Nos. 51, 68, 100, 167, 171, 200, 237, and 293.[38]

Helmerich & Payne, Inc. delivers gas to Panhandle under two gas purchase contracts, being Helmerich & Payne's FPC Rate Schedule Nos. 28 and 29.[39]

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[34] Cabot Exs. 2-10, 13, 14.
[35] Cities Service Oil Exs. 1-6.
[36] Columbian Exs. 1-7.
[37] Dorchester Exs. 4, 5, 6.
[38] Gulf Exs. 15-22.
[39] Helmerich & Payne Ex 10.

Mobil delivers gas to Panhandle under eleven contracts, being its FPC Rate Schedule Nos. 246, 223, 248, 299, 303, 11, 54, 385, 369, 301, and 245.[40]

Pan American delivers gas to Panhandle under eight contracts, being its FPC Rate Schedule Nos. 134, 194, 196, 221, 223, 276, 365, and 425.[41]

Texaco, Inc., delivers gas to Panhandle under twenty-two contracts, being its FPC Rate Schedule Nos. 142, 136, 152, 164, 171-173, 224, 230, 242, 244, 256, 289, 303, 304, 309, 315, 318, 344, 352, 353, and 367.[42]

Superior Oil Company is a Nevada corporation with its principal place of business in the State of Texas. Superior delivers gas to Panhandle under three contracts, included in its FPC Rate Schedule Nos. 110, 1, and 43.[43]

These named lessee-producer defendants appear individually and as representatives of a class defined by the court as comprising

> "... the persons, firms and corporations denominated 'lessee-producers,' who are the owners of leasehold interests in the oil and gas leases [from which gas is produced for delivery to Panhandle Eastern Pipe Line Company] and who deliver, have delivered or will deliver helium contained in gaseous streams directly or indirectly to Panhandle Eastern Pipe Line Company, which helium has been, is being or will be removed and delivered by plaintiff in interpleader National Helium Corporation into the possession of the United States of America at the delivery point described in that certain contract between the United States and National Helium Corporation dated October 13, 1961."[44]

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[40] Mobil Exs. 15-25.
[41] Pan American Exs. 5-12.
[42] Texaco Exs. 15, 16, 18-32, 34-38.
[43] Superior Exs. 2, 3, 4.
[44] Dkt. 1135, KC-1969.

The named defendant individuals, Ralph Grounds, Henry Hitch, and approximately five hundred other individuals appear individually and as representatives of a class defined as comprising

> ". . . the persons, firms and corporations owning [a] mineral interest in land from which helium has been, or is being, or will be severed from the ground in connection with or because of production under oil and gas leases, which helium has been, is being or will be taken into possession by the United States of America in Seward County, Kansas at the delivery point described in that certain contract between the United States of America and plaintiff in interpleader National Helium Corporation dated October 13, 1961."[45]

Phillips was introduced into this case as a third party defendant by landowners, alleging underpayment of royalties on gas produced in Moore and Hansford Counties, Texas.[46] This claim has been withdrawn. The remaining counts of that third-party complaint were never addressed to Phillips, and it may not be required to respond to those claims for the first time after trial. Phillips' request for findings of fact and conclusions of law demonstrating the lack of independent jurisdictional grounds for the claim is therefore moot.

We conclude in KC-1980 that lessee-producers are proper parties both individually and as representatives of a class; that Phillips must be dismissed on the ground that no claim is asserted against it.

W-3009.

The original plaintiffs in this case are Oliver S. Brown,

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[45] Ibid.
[46] Dkt. 163, KC-1980.

Harry Lightcap, T. A. Dudley, Dan C. Sullivan, Jr., L. F. Roderick, Stanley Julian, the E. W. Campbell Estate, Ruth C. Rice, Executrix, Herbert and Norma Foster, Fred Shore and Hazel Shore, Gerald G. Finley, A. W. Klassen, John Alford, Robert Larrabee, Robert Larrabee as Executor of the Estate of Lee Larrabee, Deceased, Emil Schnellbacker, Wylie R. Gore, George H. Anderson, Ora V. Martin and Lela Z. Martin, and Gene Cyr. The intervening plaintiffs are Alfred Akers (Akin), Chester C. Clark, Dorothy M. Cox, Della M. Drake, John R. Jones, Bertha E. Kells, C. A. Kells, a/k/a Chester A. Kells, W. L. Lacey, L. G. Moore, Warden L. Noe, Bernard J. Nordling, Homer Leroy Parshall, Leone L. Parshall, Lillie Snare (Snarl), June Stegman as Guardian of Patricia A. Stegman, June Stegman as Guardian of Victor J. Stegman, and Edith Thompson. These parties appear individually and as representatives of a class defined by the court as consisting of:

"... the persons, firms and corporations owning mineral interests in land from which helium has been, or is being severed from the ground in connection with or because of production under oil and gas leases, which helium has been, or is being taken into the possession of the defendant United States of America at points in Seward, Ellsworth or Grant Counties, Kansas, or Hansford or Moore Counties, Texas, described in the four following contracts:

(a) Contract between United States of America and Helex Company, now Northern Helex Company, dated August 15, 1961.

(b) Contract between United States of America and Cities Helex dated August 22, 1961.

(c) Contract between United States of America and National Helium dated October 13, 1961.

(d) Contract between United States of America and Phillips dated November 13, 1961."[47]

The United States is the sole defendant in this case. It has joined as third party defendants National Helium, Cities Service Helex, Inc., Northern Helex Company (formerly Helex Company) and Phillips, the parties to the four contracts recited in the foregoing paragraph.

W-3159.

The named original plaintiffs in this action are Ralph Grounds and Henry Hitch, Jr. Intervening plaintiffs are Robert Adams, C. Dale Duer, Hubert R. Elrod, Ruth F. Fischer, Zuba D. Jefferis, Alonzo C. Robinson, the John A. Spohn Estate, W. D. Ross and Herb Williams. These parties appear individually and as representatives of the class of plaintiff as defined in the preceding case, W-3009. Again, the United States is the sole defendant, and it has impleaded as third-party defendants the same four corporations impleaded in the preceding case, W-3009.

CLASS ACTIONS

The Court has, in the light of the evidence and recent decisions, reconsidered its rulings designating certain named representatives of described classes for the prosecution and defense of certain claims in each of the consolidated cases.

The basic prerequisites for maintenance of a class action are stated in Rule 23(a), F.R.Civ.P.:

"(a) Prerequisites to a Class Action. One or more members of a class may sue or be sued as representative parties on behalf of all only if (1) the class is so numerous that joinder of all members is impracticable, (2) there are question of law or fact common to the class, (3) the claims

[47] Dkt. 1135, KC-1969.

> or defenses of the representative parties are typical of the claims or defenses of the class, and (4) the representative parties will fairly, and adequately protect the interests of the class."

In addition, the action must satisfy one or more of four prerequisites stated in Rule 23(b).

By order filed January 16, 1947,[48] the Court defined the classes of landowners and lessee-producers in each interpleader case as set out supra under the heading, "Parties." In addition, we defined the class of plaintiff landowners in W-3009 and W-3159. As to each class, we found that the class was so numerous that joinder of all members was impracticable, that there were questions of law or fact common to each class, that the claims and defenses of the representative parties in each class were typical of the claims and defenses of the class, that the representative parties would fairly and adequately protect the interests of the class.

We found further as to each class that the further prerequisites of Rule 23(b) (1) (A) and (B) were met, in that prosecution of separate actions by or against individual members of the class would create a risk of:

> "(A) inconsistent or varying adjudications with respect to individual members of the class which would establish incompatible standards of conduct for the party opposing, the class, [and]
>
> "(B) adjudications with respect to individual members of the class which would as a practical matter be dispositive of the interests of the other members not parties to the adjudications or substantially impair or impede their ability to protect their interests; . . . ."

A separate finding was made as to the class of lessee-producers in KC-1980, on the ground that claims by and

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[48] Dkt. 1135, KC-1969.

against members of that class met the prerequisite of Rule 23(b)(3), in that "questions of law or fact common to the members of the class predominate over any questions affecting only individual members, and a class action is superior to other available methods for the fair and efficient adjudication of the controversy."[49] We adopt these findings herein.

In our view, these actions are eminently suited to class proceedings. There are estimated to be approximately 30,000 persons who receive income from the production of helium-bearing natural gas from which helium is extracted, by virtue of ownership of land, mineral interest, and/or royalty or other interests. These cases have required lengthy, extensive and costly discovery proceedings, the expenditure of many hours in legal research, assembly and preparation of exhibits, numerous pretrial appearances, in addition to the conduct of a forty-three day trial. [Counsel for landowners state that their expenditures to date exceed $90,000.] To require thousands of individual landowners to present their claims to the fund individually would encumber these interpleader actions with procedural and other complexities of perhaps unmanageable proportions. Likewise, in cases W-3009 and W-3159, the class proceeding permits the economical and expeditious resolution of many claims in one proceeding. As stated in *Eisen* v. *Carlisle & Jacqueliv*, 391 F.2d 555 (2nd Cir. 1968):

> "Class actions serve an important function in our judicial system. By establishing a technique whereby the claims of many individuals can be resolved at the same time, the class suit both eliminates the possibility of repetitious litigation and provides small claimants with a method of ob-

[49] Dkt. 66, KC-1980.

> taining redress for claims which would otherwise be too small to warrant individual litigation." 391 F.2d at 560.

Likewise, the lessee-producers are very numerous. Each interpleading pipeline it is estimated has several hundred gas purchase contracts in the area. Joinder of vendors under all these contracts would be impracticable and unnecessary.

Cities takes the position that the landowner representatives cannot adequately represent the entire class of landowners, because of alleged conflicting and antagonistic interests between two subgroups of the class, those whose recovery depends entirely upon a determination that helium is "gas" within the terms of mineral conveyances, oil and gas leases, unitization agreements and like documents, and those whose recovery would be enhanced by a determination that helium is *not* "gas" within the terms of such documents.

Certain lessee-producers argue that the landowner class cannot sue or be sued as a class unless they are divided into seven sub-classes as authorized by Rule 23(c)(4).[50]

Of the recited sub-classes, five claim in common that leases do *not* cover helium. Within those five sub-classes, there is no antagonism or conflict of interest between those who may claim all or only a proportionate share of helium or the proceeds from its sale. Lessee-producers envision two sub-classes as claiming that leases *do* cover helium, and claiming in addition that lessee-producer gas purchase contracts provide no payment for helium contained in natural gas delivered thereunder. We would point out that these two sub-classes would also recover if leases were found *not* to cover helium. We fail to perceive any antagonism or conflict

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[50] See, e.g., Dkt. 1047, KC-1969.

of interest among the sub-classes with respect to the issues here involved.

Landowners in pleading and presenting their case have sought recovery on alternative propositions: One, that the leases do *not* convey helium; the other, that they do, but that landowners have not been paid therefor. The Court remains convinced that there is no occasion to create seven sub-classes among landowners to present separately, two alternative and mutually exclusive theories, which have both been most ably investigated, pleaded and tried by counsel in behalf of the landowner class.

In Cases W-3009 and W-3159, the United States denies that "all owners of lands or mineral interests from which helium-bearing natural gas is produced which is the subject matter of this action comprise a class which can be represented by the named plaintiffs (Landowners) in this action."[51] The United States does not specify in what particular respects the representive parties, or their counsel, fail to represent adequately the absent members of the class, or in what respect their claims and defenses are not typical of those absent persons. For the reasons stated supra in this section, we remain of the view that the claims of representative landowners are typical of those of absent members, that they raise questions of fact and law common to the class, and that the representative parties have fully represented and protected the interests of the entire class.

Lessee-producers have renewed objections to orders of the court, all entered prior to July 1, 1966, finding that landowners constituted a "true" class in each of the interpleader

[51] Pre-Trial Order, W-3009, W-3159, p. 13, ¶ 2 of each case.

cases.[52] Rule 23 as amended became effective July 1, 1966, and was applied to all pending cases in subsequent class rulings. However, the order of January 16, 1967, in which the classes were defined, provided that "classes previously defined by the court in regard to claims of . . . Northern Natural Gas Company and Northern Helex Company in KC-1969 and claims of third-party plaintiff Panhandle Eastern Pipe Line Company in KC-1980 are not affected by this order." The class of landowner defendants in KC-1980 was previously denominated a "true" class.[53] This categorization was important under the old rule principally for identifying persons bound by the judgment, and helping in turn to determine the res judicata effect of the judgment if questioned in a later action. See Notes of Advisory Committee on Rule 23. We determine that the extent of the judgment in this case is to be governed under Rule 23 as amended. These objections are thus mooted.

Lessee-producers object to the court's order that Panhandle's third-party complaint in KC-1980 be maintained against them both individually and as representatives of a class of approximately 540 producers who sell natural gas to Panhandle which is processed for helium extraction. Maintenance of this complaint against the third-party defendants as a class was ordered under Rule 23 (b) (3), for which the court made the requisite finding that "questions of law or fact common to the members of the class predominate over any questions affecting only individual members, and a class action is superior to other available methods for the fair and

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[52] Dkt. Nos. 535-538, 649, KC-1969.
[53] Dkt. 649, KC-1969.

efficient adjudication of the controversy."[54] Accordingly, the court directed notice be given to absent members of the class.

Rule 23 (b) (3) recites four "non-exhaustive factors" to be considered in authorizing a class proceeding under that subsection:

> "(A) the interest of members of the class in individually controlling the prosecution or defense of separate actions; (B) the extent and nature of any litigation concerning the controversy already commenced by or against members of the class; (C) the desirability or undesirability of concentrating the litigation of the claims in the particular forum; (D) the difficulties likely to be encountered in the management of a class action."

At no time prior to trial did it appear that any individual member of the class had any interest in exercising separate control over the prosecution or defense of any claim, that any prior litigation existed between Panhandle and any member of the lessee-producer class respecting the issues raised in the third-party complaint, that it was not desirable and in the interest of expedition and economy of litigation to concentrate litigation of Panhandle's claims against all its gas vendors in one particular forum, or that a class proceeding would occasion any special difficulties. Moreover, it was clear that questions of law and fact common to members of that class predominated over questions affecting only individual members, and that permitting maintenance of the claims of Panhandle's gas vendors to the fund in the interpleader action was superior to any other available method for the fair and efficient adjudication of the lessee-producers' claims to that fund in KC-1980. After trial, with the benefit

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[54] Dkt. 66, KC-1980; See Motion, Dkt. 58, KC-1980.

of hindsight, the court remains convinced of the correctness of the order regarding the class of lessee-producers in KC-1980, and we decline to disturb it.

We find that the representation of the interests of both classes is fully adequate, on at least two grounds. First the representation by counsel for both the landowner and lessee-producer classes has been of the highest quality. Their presentation reflected diligent, careful, and incisive attention to the interests of the class. In addition to the most careful investigation by deposition, interrogatories and other discovery of facts, they have explored fully, in evidence, briefs and arguments, what must surely be every conceivable theory which the facts could possibly support.

Secondly, the very number of representative parties is substantial. There are over 200 named landowner claimants in KC-1945; seven in KC-1946; six in KC-1947; 45 in KC-1948; over 500 in KC-1969; and over 300 in KC-1980, in addition to those named in W-3009 and W-3159, some of whom appear in the interpleader cases, also. Thus, in toto, over one thousand landowners advanced claims in their own behalf and that of others similiarly situated in all these consolidated cases.

Lastly, we turn to the question of notice to the members of the landowners and lessee-producer classes to whom the court has not yet directed notice to be given, which includes all except the lessee-producer class in KC-1980. In our order filed January 16, 1967,[55] the court found that the claims of all the classes met the requirements of Rule 23 (b) (1)

[55] Dkt. 1135, KC-1969.

(A) and (B), and that accordingly notice to absent members of those classes was not required at that stage of the case, prior to trial on the issues of liability alone. This holding was based on the view that notice to absent members was required only when the class proceeding was founded upon Rule 23 (b) (3).

Subsection (c) (2) provides as follows:

"In any class actic . maintained under subdivision (b) (3), the court shall direct to the members of the class the best notice practicable under the circumstances, including individual notice to all members who can be identified through reasonable effort. The notice shall advise each member that (A) the court will exclude him from the class if he so requests by a specified date; (B) the judgment, whether favorable or not, will include all members who do not request exclusion; and (C) any member who does not request exclusion may, if he desires, enter an appearance through his counsel."

Absent requirement of notice in class proceedings under Rule 23(b)(1) and (2), we regarded notice as mandatory only for class proceedings under 23(b)(3). The Court of Appeals for the Second Circuit in May, 1968, addressed itself to this point, thus:

"We must also note that plaintiff's effort to qualify the action under 23(b)(1) and 23(b)(2) was induced by his erroneous theory that notice is not 'mandatory' under these sections. This theory is based on the assumption that 23(c)(2) provides the only 'mandatory' notice required by the new rule. Since this particular section refers exclussively to actions brought under 23(b)(3), other suits cognizable under either 23(b)(1) or 23(b)(2) would only be subject to 'discretionary' notice under 23(d)(2). Nevertheless, we hold that notice is required as a matter of due process in all representative actions, and 23(c)(2) merely requires a particularized form of notice in 23(b)

(3) actions. . . ." *Eisen* v. *Carlisle & Jacquelin,* 391 F.2d 555 at 564-565 (2nd Cir. 1968) [Footnotes and citations omitted.]

We think that the essential requisite of due process as to absent members of the class is not notice, but the adequacy of representation of their interests by named parties. As stated in *Dolgow* v. *Anderson,* 43 F.R.D. 472 (E.D.N.Y. 1968):

"The Supreme Court has indicated that adequacy of representation, not form of notice, is the crucial consideration. See *Hansberry* v. *Lee,* 311 U.S. 32, 42, 61 S.Ct. 115, 118, 85 L.Ed. 22 (1940) ('this Court is justified in saying that there has been a failure of due process *only in those cases where it cannot be said that the procedure adopted, fairly insures the protection of the interests of absent parties who are to be bound by it.')" [Emphasis by the court.] 43 F.R.D. at 500.

We cannot, of course, determine the res judicata effect of the judgment entered herein, but we deem in the public interest that the extent of the judgment be as broad as constitutionally permissible. We think this interest will be best served by directing that "the best notice practicable under the circumstances" be given all members of the class of landowners and lessee-producers, prior to entry of judgment, apprising them of the extent of the proposed judgment and providing any member thereof adequate time to signify his dissatisfaction with the adequacy of representation of his interest, and to advance any new claim to the interpleader fund, or against the United States which arises out of his status as a member of the described class and which has not been adjudicated herein.

The present view of the Court is that the best notice practicable includes individual notice to all members of each

class, and that this can be accomplished with "reasonable effort."

JURISDICTION

The basic jurisdiction of the Court is premised upon 28 U.S.C. Section 1335; 1397 and 2361.

Jurisdiction of the six interpleader cases is founded upon 28 U.S.C. Section 1335, which provides as follows:

> "(a) The district courts shall have original jurisdiction of any civil action of interpleader or in the nature of interpleader filed by any person, firm, or corporation . . . having in . . . its custody or possession money or property of the value of $500 or more, . . . or being under any obligation written or unwritten to the amount of $500 or more, if
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> (1) Two or more adverse claimants, of diverse citizenship as defined in Section 1332 of this title, are claiming or may claim to be entitled to such money or property, or to any one or more of the benefits arising by virtue of any note, bond, certificate, policy or other instrument, or arising by virtue of any such obligation; and if (2) the plaintiff has deposited such money or property or has paid the amount of or the loan or other value of such instrument or the amount due under such obligation into the registry of the court, there to abide the judgment of the court, or has given bond payable to the clerk of the court in such amount and with such surety as the court or judge may deem proper, conditioned upon the compliance by the plaintiff with the future order or judgment of the court with respect to the subject matter of the controversy.
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> (b) Such an action may be entertained although the titles or claims of the conflicting claimants do not have a common origin, or are not identical, but are adverse to and independent of one another."

In *State Farm Fire & Cas. Co.* v. *Tashire,* 386 U.S. 523, 18 L.Ed.2d 270, 87 S.Ct. 1199 (1967), the Court established the principle that in interpleader actions under § 1335, only

"minimal diversity" is required, that is, diversity of citizenship between any to adverse claimants. Such diversity exists in these cases.

By the terms of the above statute, jurisdiction is dependent upon deposit of the money or property in court by the interpleading party, or else the giving of bond "with such surety as the court or judge may deem proper." *Farmers Elevator Mutual Insurance Company* v. *Jewett,* 394 F.2d 896 (10th Cir. 1968).

In KC-1945, Cities Service Gas has given bond in the sum of $16,000, with proper surety,[56] and Cities Service Helex gave like bond upon entry into the case.[57] Cities Service Helium (now Cryogenics), joined as an involuntary plaintiff, filed no bond, so far as appears. In KC-1946, -1947, -1948, Cities Service Gas and Cities Service Helex each filed the following respective bonds: $15,000;[58] $12,000;[59] $32,000.[60] In KC-1969, Northern Natural Gas and Northern Helex jointly filed a bond, with surety, of $100,000.[61] In KC-1980, National Helium filed bond with surety of $100,000. Ashland Oil & Refining Company moved December 15, 1966, to enlarge the bonds in case KC-1947,-1969, and -1980, to not less than $75,000,000, $75,000,000, and $110,000,000, respectively,[62] these sums based on movant's estimates that during a period of six years projected to elapse from the commencement of helium

[56] Dkt. 5, KC-1945.
[57] Dkt. 48, KC-1945.
[58] Dkts. 5, 37, KC-1946.
[59] Dkts. 5, 39, KC-1947.
[60] Dkts. 5, 58, KC-1948.
[61] Dkt. 5, KC-1969.
[62] Dkt. 1095, KC-1969.

extraction operations and sales by the interpleading plaintiffs in those cases until judgment herein, proceeds by the plaintiffs would total approximately $64,000,000, $67,000,000, and $107,000,000, respectively. After argument, the motion was withdrawn.[63] Shortly thereafter, counsel for Cities Service Gas Company filed an order reciting a statement and agreement made in open court that "Cities Service Gas Company would be responsible for and would pay and satisfy any final money judgment against Cities Service Helex, Inc. or Cities Service Cryogenics, Inc., in this action which is not otherwise paid or satisfied," the captioned case being KC-1946 only.[64]

The Interpleaded Funds

It has been generally agreed since the commencement of these cases that the funds involved consisted of the proceeds from the sale of helium. The interpleading plaintiffs have been and presently are making sales of helium only to the United States.

The Court finds that in cases KC-1945 through KC-1948, the fund consists of all proceeds received and to be received by Cities Service Helex, Inc., from the United States as payment for helium contained in a helium-gas mixture delivered to the United States pursuant to that contract between the United States and Cities Service Helex, Inc., executed August 22, 1961. Stated otherwise, the subject matter of these four cases consists of the obligation of Cities Service Helex, Inc., to pay the proceeds received by it from the sale of helium to the United States or to any other pur-

[63] Dkt. 1137, KC-1969.
[64] Dkt. 1139, KC-1969.

chaser, to any person found to be the owner of such helium, or to be otherwise entitled to participate in such proceeds.

The Court further finds that the fund interpleaded in KC-1969 consists of all proceeds received or to be received by Northern Helex, Inc. (formerly Helex, Inc.) as payment for helium contained in a helium-gas mixture delivered to the United States under that contract between the United States and Helex, Inc., dated August 15, 1961. Stated otherwise, the subject matter of the action consists of the obligation of Northern Helex, Inc., to pay the proceeds received by it from the sale of helium to the United States, or to any other purchaser, to any person found to be the owner of such helium, or to be otherwise entitled to participate in such preceeds.

The Court further finds that the fund interpleaded in KC-1980 consists of all proceeds received and to be received by National Helium Corporation from the United States as payment for helium contained in a helium-gas mixture delivered to the United States under a contract executed October 18, 1961. Again, stated more broadly, the subject matter of the action consists of the obligation of National Helium to pay the proceeds received by it as payment for helium sold to the United States or to any other purchaser, to any person found to be the owner of such helium, or to be otherwise entitled to share in the proceeds of its sale.

The foregoing funds were not those initially interpleaded by plaintiffs in the Cities cases and in KC-1980. The landowners moved to dismiss all six interpleader actions for want of jurisdiction, arguing, inter alia, that the funds before the Court did not include the amounts received by the inter-

pleading plaintiffs from the sale of helium to the United States. The Court overruled this motion, stating that the "subject matter in controversy as contemplated by the interpleader statute is the claim of ownership under the mineral leases of the helium produced and marketed." This ruling was affirmed in *Grounds* v. *Northern Natural Gas Co.*, 327 F.2d 1003 (10th Cir. 1964) (per curiam).

Subsequent to this ruling, the subject fund was more precisely defined and enlarged. By order filed January 10, 1967, the fund in the Cities cases (KC-1945, -1948) was defined thus:

> "Counsel for plaintiffs [the Cities group] states that the interpleaded fund involved in such four law suits, is the proceeds from the sale of all the helium which has been or is being extracted by Cities Service Helex, Inc."[65]

In KC-1980, plaintiff National Helium interpleaded at the outset only its obligation to pay to Panhandle $2.06 per Mcf for helium extracted from the gas stream belonging to Panhandle. It did not interplead the monies received for its sale to the United States. In the commencement of that action, however, National Helium sought and obtained an injunction against further prosecution of a declaratory judgment action in an Oklahoma state court, in which plaintiffs sought a determination that they were the owners of and entitled to the net value of all helium sold by National Helium to the United States, thus putting in issue in that state court case the right to entire payments for helium received by National Helium for helium sales to the United States. The discrepancy between the scope of the two cases

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[65] Dkt. 1114, KC-1969.

was raised at a hearing April 20, 1964, after the Tenth Circuit ruling supra. Counsel for National Helium then stated that "if the pleading (in KC-1980) is not as broad as the pleading in the State Court so that the issues are not the same, that we will make them the same." Counsel stated further at that hearing:

> "Your Honor, what I have been trying to say was that in the National Helium case, at least, we look upon the liability of National Helium as the value of the helium, whatever it may be, more or less. I mean it might be more than eleven dollars. It might be less. We accept the liability of National Helium for the value of the helium and that ought to clear the air as far as National Helium goes."[66]

Although examination of the files discloses no amendment of the pleadings, we cannot but conclude from the foregoing that the interpleaded fund in KC-1980 is as we have determined it to be.

Jurisdiction of Landowners' Cross-Claims.

The landowners' claim to the fund rests on one of two theories; first, that oil and gas leases in which they hold interests and under which natural gas is produced do not convey helium as a constituent of the "gas" leased thereunder, and secondly, that the Helex companies are unjustly enriched by monies received by them from the sale of helium.

In addition to their claims against the fund, however, landowners have asserted cross-claims against the lessee-producers, the assertion of which is contingent upon a finding that landowners have no interest in the interpleaded funds themselves. Landowners urge that if the leases do cover helium, first that they have not been paid the proper

[66] Tr. 10:780-781.

royalties therefor under the fractional royalty provisions of the leases, and are entitled to recover royalties based upon the fair and reasonable value of helium as attained by reason of its severance from the stream and subsequent marketing; alternatively, landowners urge that the lessee-producers have failed to market helium produced under such leases with reasonable diligence, and seek cancellation of the leases as to the helium portion of the gas stream.

Rule 13(g) F.R.Civ.P. provides thus:

> "A pleading may state as a cross-claim any claim by one party against a co-party arising out of the transaction or occurrence that is the subject matter either of the original action or of a counterclaim therein or relating to any property that is the subject matter of the original action. Such cross-claim may include a claim that the party against whom it is asserted is or may be liable to the cross-claimant for all or part of a claim asserted in the action against the cross-claimant."

Lessee-producers urge that these cross-claims do not relate to the "property that is the subject matter of the action," the proceeds received by the plaintiffs from the sale of helium, that these claims are not ancillary to the interpleader subject matter, that in fact, they are alternative claims not against the fund nor the holders thereof, but against co-claimants founded upon independent contracts, the leases, recovery upon which claims would leave the interpleaded funds intact, and would further require, the granting of in personam judgments against the lessee-producers, which is beyond the jurisdiction of the court in statutory interpleader actions.

In *Knoll* v. *Socony Mobil Oil Company*, 369 F.2d 425 (10th Cir. 1966), *cert. denied*, 386 U.S. 977, 18 L.Ed.2d 138, 87 S.Ct. 1173 (1967), the Court stated thus:

> "A related jurisdictional issue is whether the trial court erred in enjoining appellants from asserting any title in or to the 'above described property' in any manner inconsistent with the terms of its order and judgment. This was an *in personam* exercise of jurisdiction. In an interpleader action, however, *in personam* jurisdiction extends only to the fund deposited with the court. Since the trial court was limited to disposition of the *res,* we must hold that the court lacked jurisdiction to enter this order." 369 F.2d at 429.

The fund before the Court in that case was the money held by Mobil and owing to the true owners of certain property and lease-hold rights therein, from which it had produced oil. The injunction extended beyond the *res,* precluding claimants from asserting any title in the realty itself.

In *Erie Bank* v. *United States Disrtcit Court for the District of Colorado,* 362 F.2d 539 (10th Cir. 1966), the Court held that in an interpleader action in which the plaintiff asserted no claim to the deposited fund, it lacked jurisdiction over a counterclaim by a claimant against the disinterested stakeholder on the ground that the latter was not an "opposing party" within Rule 13. It would appear to follow that when the stakeholder was himself an interested party, a counterclaim would be not only permissible under Rule 13, but compulsory thereunder, and the Court would be empowered to enter judgment on such counterclaim.

As to landowners' cross-claims, however, for additional royalties on helium or on the value of natural gas as allegedly enhanced by the presence of helium, and for cancellation of leases as to helium for failure to market same, we must agree with the lessee-producers that those claims do not relate to the subject matter of the action. It is true that land-

owners' claims are founded upon the identical leases upon which lessee-producers base, in important part, their claims to the fund. In interpleader actions, however, the "subject matter of the action" is not a set of facts, a transaction or other occurrence which gives rise to litigation, but a specific identified fund or property. Claims must not only "relate" to that property, but be asserted against it, as we view the present law of this Circuit.

This is a type of case of which the Supreme Court spoke in *State Farm Fire & Cas. Co.* v. *Tashire,* 386 U.S. 523, 18 L.Ed.2d 270, 87 S.Ct. 1199 (1967), "where a stakeholder, faced with rival claims to the fund itself, acknowledges—or denies—his liability to one or the other of the claimants. In this situation, the fund itself is the target of the claimants. *It marks the outer limits of the controversy.*" 386 U.S. at 534, 18 L.Ed.2d at 277. [Emphasis supplied.] [Footnote omitted.] We therefore lack jurisdiction over the landowners' cross-claims against their lessee-producers.

Jurisdiction of Pipeline Counterclaims.

The lessee-producers claim the fund on the ground that helium, a non-combustible and non-hydrocarbon component of the gas stream, did not pass to the pipeline companies under the gas purchase contracts between the parties. Accordingly, the pipeline companies, Cities Service Gas, Northern Natural and Panhandle have asserted counterclaims against the lessee-producers on their warranties of title in contracts with pipeline companies contingent upon the recovery by the producers of the funds.

These claims are twofold: First, it is asserted that warranties of title in the parties' gas purchase contracts extend

to the full gas stream, and that if only the hydrocarbon portion passed thereunder, the lessee-producers must respond to the purchasers for breach of warranty respecting the balance of the stream. Alternatively, pipeline companies seek recovery from each of the lessee-producers of that percentage of all payments made under the gas purchase contracts which the volume of non-combustible constituents including helium bears to the volume of the total stream.

These counterclaims are founded upon the identical gas purchase contracts under which the lessee-producers claim the fund. They arise out of the "transaction . . . that is the subject matter of the opposing party's claim," or they relate to property that is the subject matter of the original action. We conclude that these counterclaims are permissible under Rule 13, insofar as they affect the rights of the parties to participate in the fund.

Jurisdiction of Claims Asserted Against the United States.

An additional jurisdictional problem is raised in the actions by landowners against the United States. The United States denies first that the landowners constitute a class, a question we have heretofore disposed of,[67] and contends further that the United States is not subject to suit by a class. In each of these cases, the landowners assert two separate claims against the government. First, they assert ownership of the helium being delivered to the United States by each of the helium extracting companies, and urge that the United States has appropriated and converted helium so delivered to its own use, and must respond to plaintiffs for

[67] Page 21, supra (Class Actions).

the fair, just and reasonable value of same. Jurisdiction for this claim under the Tort Claims Act is asserted under 28 U.S.C. § 1346(b), which confers upon the district courts exclusive jurisdiction of:

> "civil actions on claims against the United States, for money damages, . . . for injury or loss of property, or personal injury or death caused by the negligent or wrongful act or omission of any employee of the Government while acting within the scope of his office or employment, under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred."

Plaintiffs' second claim commingles theories of third-party beneficiary rights and reverse condemnation. It is alleged that the United States has acquired possession of the helium-gas mixture received from its vendors by the exercise of its power of eminent domain, and further that the contracts under which the United States purchases helium provide for payment therefor to the owners thereof, and that as such owners, the plaintiffs are third-party beneficiaries thereof. Jurisdiction for this second claim under the Tucker Act is asserted under 28 U.S.C. § 1346(a)(2), which confers upon the district courts, concurrent with the Court of Claims, jurisdiction over the following cases:

> "(2) Any other civil action [other than enumerated tax-related actions] or claim against the United States, not exceeding $10,000 in amount, founded either upon the Constitution, or any Act of Congress, or any regulation of an executive department, or upon any express or implied contract with the United States, or for liquidated or unliquidated damages in cases not sounding in tort."

Although landowners alleged that no individual claim may exceed $10,000, they have stipulated that claims of some

individuals exceed that sum.[68]

The defendant United States asserts that the United States is not liable to suit by a class without its consent, that since neither § 1346(b) or § 1346(a)(2) makes express provision for suit by a class, no such consent has been given. The government invokes the principle that statutory waivers of sovereign immunity are strictly construed, that waivers are not lightly implied, and that no justification exists for implying such a waiver in favor of a class of plaintiffs, most of whom are not identified.

It is further argued that under the Tucker Act,[68a] and its predecessor statutes dating back to 1855, no court has granted relief in a class action against the government, and that neither the Tucker Act nor the Tort Claims Act adopted in 1946 has been amended by Congress to provide for such proceedings. Defendant further complains of the burden falling upon the government by the difficulties of payment of judgments in favor of a large class of plaintiffs, many of whom are not now identified. Payment of persons holding judgments against the United States rendered in the district courts is authorized in 28 U.S.C. § 2414, payments to be made on settlements by the General Accounting Office upon certification by the Attorney General that the judgment is final, that is, that no appeal will be taken therefrom or that no further review will be sought of a decision affirming the same. This burden does not seem substantial. Rule 23 requires that "[t]he judgment in an action maintained as a

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[68] Dkt. 527, KC-1969; See Government's Brief, Dkt. 892, KC-1969; Dkt. No. 59, W-3009.

[68a] Act of March 3, 1887, c. 359, 24 Stat. 505.

class action under subdivision (b)(1) or (b)(2), [the instant case] whether or not favorable to the class, shall include and describe those whom the court finds to be members of the class."

Notwithstanding that Rule 1, F.R.Civ.P., provides that "[t]hese rules govern the procedure in the United States district courts in *all* suits of a civil nature . . . with the exceptions stated in Rule 81," (none of which apply) [emphasis suppled] it is argued that absent an express consent to suit by a class, no jurisdiction exists, and that under Rule 82, the rules "shall not be construed to extend . . . the jurisdiction of the United States district courts." In *United States* v. *Sherwood,* 312 U.S. 584, 61 S.Ct. 767, 85 L.Ed. 1058 (1941), the Court stated:

> "The jurisdiction thus limited [by the Tucker Act] is unaffected by the Rules of Civil Procedure which prescribe the methods by which the jurisdiction of the federal courts is to be exercised, but do not enlarge the jurisdiction." 312 U.S. at 591, 85 L.Ed at 1064.

The Court stated further that the Tucker Act "must be interpreted in the light of its function in giving consent of the Government to be sued, which consent, since it is a relinquishment of a sovereign immunity, must be strictly interpreted." 312 U.S. at 590, 85 L.Ed. at 1063.

The Court again addressed itself to the canon of strict construction in *United States* v. *Yellow Cab Co.,* 340 U.S. 543, 95 L.Ed. 523, 71 S.Ct. 399 (1951), where it stated, quoting *United States* v. *Aetna Cas. & Surety Co.,* 338 U.S. 366, 383, 94 L.Ed. 171, 186, 70 S.Ct. 207, 12 A.L.R. 2d 444 (1949):

> " 'In argument before a number of District Courts and

> Courts of Appeals, the Government relied upon the doctrine that statutes waiving sovereign immunity must be strictly construed. We think that the congressional attitude in passing the Tort Claims Act is more accurately reflected by Judge Cardozo's statement in *Anderson* v. *Hayes Construction Co.*, 243 N.Y. 140, 147, 153 N.E. 28, 29-30: "The exemption of the sovereign from suit involved hardship enough where consent has been withheld. We are not to add to its rigor by refinement of construction where consent has been announced." ' " 340 U.S. at 554, 95 L.Ed. at 532.

In *Capital Transit Co.* v. *United States,* companion case to and decided with *Yellow Cab, supra,* the defendant sought to implead the United States as a third-party defendant, as a joint tort-feasor obligated to contribute to any judgment ultimately won by the plaintiff. The lower court dismissed the third-party complaint, holding it barred on the ground that no consent to such suit had been given. The Court reversed, holding that, having decided in the companion case that the government could be sued for contribution in an independent action, such right could be enforced by way of third-party complaint, and that the third-party practice provided for by Rule 14 was applicable to suits against the United States. In *United States* v. *Muniz,* 374 U.S. 150, 166, 10 L.Ed.2d 805, 817, 83 S.Ct. 1850 (1963), the Court reaffirmed its holding in *Rayonier, Inc.* v. *United States,* 352 U.S. 315, 1 L.Ed.2d 354, 77 S.Ct. 374, that " '[t]here is no justification . . . to read exemptions into the Act beyond those provided by Congress. If the Act is to be altered that is a function for the same body that adopted it.' " The rule of strict construction is not one of narrow construction. The prevailing trend of decision is canvassed in *City of Pittsburgh*

v. *United States,* 359 F.2d 564 (3d Cir. 1966):

> "Although at one time the doctrine of sovereign immunity had such vitality that a waiver of it was strictly construed (See *United States* v. *Sherwood,* 312 U.S. 584, 590, 61 S.Ct. 767, 85 L.Ed. 1058 (1941)), the purpose of the Federal Tort Claims Act to permit those injured by the negligence of employees of the United States to recover damages to the same extent as if the United States were a private person expresses so strong a public policy that the statute has been deemed to be highly remedial and has received a liberal construction. [Citations omitted.] This overriding purpose, expressed in the statute, has provided the guide to the interpretation of the Act, and it has been applied in some circumstances where its literal language might have resulted in a restricted meaning. . . . [T]he view has ultimately prevailed that the United States may be sued by a subrogee of the injured party, by an indemnitee who has paid the injured party's claim, and that it may be joined originally with other defendants as a joint tort-feasor, and may also be impleaded as a third-party defendant to enforce contribution against it as a joint tort-feasor." 359 F.2d at 567 [Footnotes omitted.]

Strictly speaking, the permissibility of a class action under the Tort Claims Act does not require construction of the language of the Act, for it is silent on the question. In substance, the government asks the Court not to construe the Act strictly or narrowly, but to create a judicial exemption from it. Neither the plaintiff nor defendant have pointed to any real increased procedural burden upon the government resulting from the defense of a class action.

Given the remedial purpose of the Tort Claims Act, and indeed of the Tucker Act, the application of Rule 23 to actions thereunder against the United States seems particularly appropriate. As stated in *Eisen* v. *Carlisle & Jacquelin,* 391 F.2d 555 (2nd Cir. 1968):

> "Class actions serve an important function in our judicial system. By establishing a technique whereby the claims of many individuals can be resolved at the same time, the class suit both eliminates the possibility of repetitious litigation and provides small claimants with a method of obtaining redress for claims which would otherwise be too small to warrant individual litigation." 391 F.2d at 560.

Quoting academic commentary on the device, the court in *Dolgow* v. *Anderson,* 43 F.R.D. 472 at 484 (E.D.N.Y. 1968), noted that the class action is "particularly appropriate where those who have allegedly been injured 'are in a poor position to seek legal redress, either because they do not know enough or because such redress is disproportionately expensive.' " The instant cases are excellent examples, where only an exceptionally circumstanced landowner could afford the lengthy, extensive and costly preparation and litigation involved.

Given the silence of either the Tucker Act or the Tort Claims Act on the propriety of class proceedings, the absence of any apparent substantial burdens sustained by the government in defending such actions, the economy of litigation achieved thereby, and the enhanced access of small claimants to legal redress against the government, we hold that jurisdiction does not fail under 28 U.S.C. § 1346(a) (2) and (b) because plaintiffs have sued as a class.

One question remains concerning jurisdiction under the Tucker Act, which confers jurisdiction over a "civil action or claim against the United States, not exceeding $10,000 in amount, . . ." If the stated jurisdictional limit for actions against the United States in the district courts under the Tucker Act applies to the entire sum sought to be recovered

from the government in the action, then jurisdiction for plaintiffs' claim under the Tucker Act lies only in the Court of Claims. If the jurisdictional monetary limit applies only to the claim of each individual plaintiff, we have jurisdiction of all claims not exceeding $10,000. No authority is cited on this issue, and independent research discloses none. We hold for the reasons set forth above that the jurisdictional monetary limit applies to the claim of each member of the class and we therefore have jurisdiction over the claims not exceeding $10,000 asserted under the Tucker Act.

As indicated, supra, plaintiffs have commingled two theories in their claim under the Tucker Act, claiming standing thereunder first as third-party beneficiaries of the contracts of the United States with each of the helium extraction companies, and secondly, as owners of property acquired by the government by exercise of its powers of eminent domain without paying just compensation therefor.

Each of the contracts upon which plaintiffs rely provides that if the vendor of helium is required to make payments to other persons for helium extracted by them and sold to the United States, or for the acquisition of helium in natural gas, the United States will reimburse each for such amounts, with the companies themselves bearing approximately the first $3.00 per Mcf of the costs of such reimbursement. The obligation of the United States runs only to its contractors, and payments are required to be made only to such companies in the amounts those companies themselves have paid, less approximately $3.00 per Mcf. Payments by the United States to any one of its contractors under these reimbursement provisions is triggered, as it were by first, a deter-

mination of the company's liability to persons found to be entitled to such compensation for the helium, and secondly, by actual payment therefor. The need for adjudication of liability may be waived by the United States, by consenting to such payments. Once these conditions are met, the obligation of the United States runs only to its contractors. The entire scheme of the contracts precludes the direct action against the United States.

A mere promise to indemnify against damages does not constitute a contract for the benefit of third persons which a party claiming damages may enforce directly against the indemnitor, "Here the promisor's liability does not arise until the promisee has suffered loss or expense. Until then the promisee has no right of action, and consequently one claiming damages can assert no derivative right against the promisor, much less a direct right." 2 Williston on Contracts § 403 (3rd ed.) "An incidental beneficiary acquires by virtue of the promise no right against the promisor or the promisee." Restatement of Contracts, § 147.

We conclude that plaintiff landowners are but incidental third-party beneficiaries, and as such lack standing to maintain their Tucker Act claim on this ground.

The balance of their claim thereunder must be founded "upon the Constitution, or any Act of Congress, or any regulation of an executive department . . ." Plaintiffs allege that the government's acquisition of helium constitutes an exercise of its powers of eminent domain. "When the United States takes property for public use and without just compensation as required by the Fifth Amendment, the owner may sue under the Tucker Act." *United States* v. *Wald,* 330 F.2d

871 at 872 (10th Cir. 1964). An actual taking must be established. Once found, the suit becomes in effect a condemnation action in reverse. Landowners must establish such a taking, as a jurisdictional prerequisite to maintenance of their Tucker Act claim, or the same must be dismissed for want of jurisdiction.

THE GEOGRAPHICAL AREA

The helium giving rise to the funds in these interpleader cases and the suits against the United States is contained in natural gas produced from an area denominated the Hugoton Gas Area, which lies in parts of three states, Texas, Kansas, and Oklahoma.[69] The area covers approximately 210 miles from north to south, 160 miles from east to west, and covers approximately 33,000 square miles and over 21 million acres. The area comprises six principal gas fields. The Kansas Hugoton Field lies in eleven Kansas counties in the southwestern part of the state: Hamilton, Kearney, Finney, Gray, Haskell, Grant, Stanton, Morton, Stevens, Seward and Meade. The Guymon Hugoton Field lies in Texas, Beaver, and Cimarron counties in Oklahoma. The Texas Hugoton and East and West Panhandle Fields lie almost wholly in the northernmost three tiers of counties, twelve in all, of the Texas Panhandle.[70]

Fields within this geographical area from which natural gas is produced but not processed for helium extraction by interpleading plaintiffs, include, among others, the Cliffside

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[69] There is some contention that parts of Colorado comprise the Hugoton Area or Field. If so, we have no indication of Colorado gas wells being involved in these proceedings.

[70] LOX 791; Helex Ex. 36 (See Maps).

Field in Texas, the Keyes Field in Oklahoma, and the Greenwood Field in Kansas.

The gas underlying the geographical area outlined above contains approximately fifteen per cent of the known natural gas reserves of the United States. It is, according to some testimony, the largest single pressure-connected gas reservoir in the world. It serves approximately fifteen million domestic and industrial consumers. Most important for this litigation, these fields were estimated, as of the mid-1950's to contain ninety-nine per cent of the economically recoverable helium in the United States, totalling approximately 119 billion cubic feet of helium from estimated resources of a total of 36.4 trillion cubic feet of gas.[71]

Commercial gas production of natural gas from the Hugoton fields began a half century ago with the completion of the first well, located in the Texas Panhandle, in 1918.[72] The first gas well in Kansas Hugoton was completed in 1922, near Liberal, and the discovery well of the Guymon Hugoton (Oklahoma) was completed in 1922. The generally-regarded discovery well of the Kansas Hugoton was completed in 1927.[73] Development of the fields in terms of wells completed was relatively slow until the late 1920's and early 1930's, when pipelines were first extended into the area, thus making accessible widespread industrial and consumer markets.[74] Development accelerated after World War II, with the further expansion of pipelines through the

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[71] LPX 53, p. 1; LPX 56, p. 10.
[72] Gensch Tr. 2:128.
[73] Gensch Tr. 2:130.
[74] Helex Ex. 37.

area, to transport gas to more widespread fuel markets. The geographical productive limits of the fields expanded gradually until in 1941, the Kansas Corporation Commission first defined the limits of the Kansas Hugoton Field.[75] The Guymon Hugoton field was first defined by the Oklahoma Corporation Commission in 1945.[76] The Texas Panhandle Fields, East and West, developed earlier, and not until 1945 did the number of wells in the Hugoton Fields of Texas, Oklahoma and Kansas equal those in the Panhandle Field.[77] From the completion of the first well in 1918 through 1965, more than 15,000 gas wells were drilled in this area.

The development of these fields is reflected in the incidence of leasing activity, which show that over 85 per cent of the leases outstanding in Kansas were taken since 1940; that over 75 per cent of the Oklahoma leases were taken after 1940; and that in Texas, where drilling and leasing activity commenced earlier, 65 per cent of the outstanding leases canvassed were taken in 1941 and thereafter.[78] Wells were drilling in the Hugoton gas area as follows:

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[75] LOX 791; Gensch Tr. 2:151-152.
[76] Gensch Tr. 2:151-153.
[77] Tr. 46:4484.
[78] LOX 794; Tr. 6:428 et seq.

Cumulative Total Wells

	Panhandle Field	Hugoton		
		Kan.	Okl.	Texas
1924	29	1	—	—
1929	444	8	3	4
1934	856	142	8	4
1939	1435	282	28	6
1944	1763	403	172	16
1949	2338	1848	760	367
1954	3010	3317	1339	838
1959	3841	3891	1378	932[79]

HELIUM AND NATURAL GAS

The presence of helium in natural gas was first discovered in 1905, by two University of Kansas professors, Cady and McFarland, who analyzed a sample from a gas well at Dexter, Kansas, drilled and completed in 1903, and discovered it to contain 1.84 per cent helium, with minute quantities of two other inert gases, neon and argon. This gas had a relatively low British thermal unit (Btu)[80] content, under 500 Btu, and was a relatively inefficent fuel gas.

Helium is contained, in either measureable or detectable quantities, in gas found in the majority of natural gas fields in the United States. In 1918, the Bureau of Mines commenced a program of gas analyses of samples collected from fields over the nation. The first report of analyses collected thereunder was published in 1921; that report discloses the

[79] Helex Ex. 37.

[80] The amount of heat required to raise the temperature of one pound of water one degree Fahrenheit at 39.2°F.

presence of helium in either trace or measureable quantities, in virtually all of 183 samples collected from Texas, Oklahoma, and Kansas.[81] Since that time, approximately 5800 gas samples have been analyzed and reported in Bureau of Mines information bulletins and circulars, representing 3,008 gas fields in 33 states in this country from which commercial gas production has been obtained. Over 95 per cent of these samples contained helium in trace or measureable quantities.[82] Of an additional 947 samples subsequently reported, only two contained no helium.[83] Thus, the presence of helium has been detected or measured in natural underground gas reservoirs throughout the greater part of the United States.[84]

The presence of helium in natural gas has not been a secret to which the Bureau of Mines has been the only privy party. Reports of gas analyses conducted by it were furnished the well owners, producers, and other persons providing samples, and commencing in 1928, helium was reported as a separate constituent in those analyses, although prior to that time it had been reported as part of the nitrogen content of gas. As indicated above, the first publication of gas analyses showing the presence of helium was dated 1921, a professional paper numbered 121, titled "Helium-Bearing Natural Gas," by G. Sherburne Rogers.[85]

There have been other publications in the United States.[86]

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[81] LOX 6.
[82] Helex Ex. 12.
[83] Helex Exs. 282-283.
[84] Helex Ex. 14.
[85] LPX 6.
[86] Helex Ex. 12.

The constituents of natural gas found in underground reservoirs in the Hugoton area include hydrocarbon compounds, ranging from methane, the compound lightest in molecular weight but lowest in Btu yield, through ethane, propane, normal butane, iso-butane, normal pentane, isopentane, and various heavier hydrocarbons. Non-hydrocarbon constituents include nitrogen, oxygen, argon, helium, hydrogen sulfide, hydrogen, and carbon dioxide. Gaseous hydrocarbons comprise by volume approximately 85 per cent of the natural gas in the Hugoton fields; the non-hydrocarbon constituents enumerated above comprise the remaining 15 per cent. Helium alone comprises, on the average, about four-tenths of one per cent of Hugoton area gas, by volume.

The composition of gas from separate wells in the Hugoton area is by no means constant. Methane, e.g., ranges from a low of 45.9 per cent to a high of 82.6 per cent; nitrogen from a high of 44.3 per cent to a low of 6.5 per cent. Helium ranges from a low of .22 per cent to .97 per cent of the total stream.[87] No gas exists in the Hugoton reservoirs which does not contain non-hydrocarbon constituents.[88]

The separate constituent components of gas in a given reservoir, and in the Hugoton area, are found in a state of random molecular diffusion; that is, separate molecules of the hydrocarbon compounds and the non-hydrocarbon elements and compounds are randomly mixed within any given pressure-connected reservoir. The diffusion may not be perfect, so that a given field, or a single well with a field, will

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[87] Helex Ex. 18.
[88] Ibid.

yield a gas stream of constant and unvarying composition. Helium itself is diffused within the Hugoton area; its rate of diffusion within a single reservoir may vary among separate vertical zones, depending upon its rate of diffusion through horizontal layers of shale separating separate gas zones.[89]

Although found together within the Hugoton Field, and in many gas reservoirs gaseous hydrocarbons and helium originate through separate processes and they may or may not derive from the same physical source beds. Hydrocarbons are generally thought to originate from chemical breakdown and reorganization of organic animal and vegetable materials deposited on the floor of prehistoric oceans overlying the Hugoton area. Helium is thought, according to the prevailing theory, to be radiogenic, that is, to have resulted from the decay or degeneration of uranium into lead, the breakdown yielding helium atoms during the process. The source beds of helium and hydrocarbon gases are frequently identical, although there is no necessary relationship between the two. The presence of helium and gaseous hydrocarbons within the same reservoir results from their property as gases to migrate through or into porous and permeable subterranean formations.[90]

Helium has never been produced from a gas well separately and apart from the total stream of raw material gas as it emerges from the wellhead. Other than the removal of liquefiable hydrocarbons through conventional mechanical or low temperature separators, it is economically impossible to separate the constituents of the gas stream at the wellhead,

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[89] Tr. 42:4216 et seq.
[90] Ibid.

and no practical or economically feasible means has been devised to date for the wellhead separation of helium from the balance of the gas stream. Thus, the composition of the natural gas stream as it is produced at the wellhead necessarily reflects the composition of the reservoir gas.[91]

The production of natural gas from underground reservoirs is accomplished by reservoir pressure, specifically, the difference between reservoir and wellhead pressure causes gas to flow through the well bore. The stream must necessarily be produced in its entirety, and with all the gaseous constituents randomly commingled in the stream as found in the reservoir.[92]

HELIUM EXTRACTION PRIOR TO 1960

The only extraction and marketing of helium prior to 1960 except as hereinafter noted was accomplished by the United States. It acted through its Bureau of Mines in the Department of the Interior, which has been charged by statute with helium research and development since 1925.

The first large-volume use for helium was discovered during World War I (1917-1918), when it was found useful for inflation of lighter-than-air craft, particularly dirigibles. Prior to that War, helium had been extracted from natural gas in only very small amounts, for laboratory purposes. The first large volume extraction was done in two plants built at Fort Worth, Texas, early in 1918, known as Experimental Plants No. 1 and 2. A third plant, Experimental Plant No. 3, was completed and started in late 1918, at Petrolia, Texas, approximately 100 miles north of Fort Worth.

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[91] Tr. 47:4545.
[92] Tr. 37:3719.

The next plant, Production Plant No. 1, was constructed at Fort Worth, Texas. Each of these plants was constructed by private firms operating under contract with either the Department of the Navy, the Bureau of Mines, or both.

Natural gas for helium extraction was furnished for these plants by the Lone Star Gas Company, a producer of gas from the Petrolia Field and a distributor in Fort Worth.[93]

The next production plant, Production Plant No. 2, was designed and built by the Bureau at Fort Worth, Texas. Although World War I concluded before helium produced in these plants could be used, production continued at Fort Worth until depletion of the Petrolia Field in 1929.

Faced with approaching depletion of that field, on May 17, 1927, the United States acquired an option for a period of two years to purchase leasehold rights in the Cliffside Field in Potter County, Texas, owned by the Amarillo Oil Company, a producer, pipeline company, and distributor of natural gas in the Amarillo area. Also on that date, the company contracted to sell and deliver natural gas to a helium extraction plant the Bureau intended to construct at Amarillo.[94]

The United States thereafter undertook to acquire both leasehold and retained royalty rights in the Cliffside Field in order to control production therefrom, to avoid pressure to increase production from royalty owners, to be free to shut in production when helium demand decreased in order to avoid the production of any gas not processed for helium extraction. Accordingly, in 1929, the United States exercised its option and began the acquisition of Amarillo's leasehold

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[93] LPX 200, 201; Helex 23, Part 1.
[94] LPX 202.

rights in the field,[95] acquiring the company's gas rights in approximately 26,000 acres of the 50,000 acre field. Leases held by Amarillo were given by W. H. Bush, the Fuqua Land & Cattle Company, and Lee Bivins. The United States acquired the Bush lessor interests by a Gas Grant dated July 19, 1930;[96] the Fuqua Land & Cattle Company interests by contract of sale dated April 17, 1930;[97] the Bivins interests by condemnation proceedings in the United States District Court for the District of Texas, covering "retained gas royalty rights" held by the Bivins heirs.[98] One heir of the Bivins estate claimed that the Bivins gas lease did not convey helium. This claim was rejected by the Commerce Department, and the condemnation of "gas rights" was completed, without mention of helium as a separate constituent of the gas.

By purchase or condemnation, the United States obtained lessors' retained gas in the balance of the field, gas rights to lands not under lease, and fee title to other property in the field, so that by 1933, the United States owned all gas rights in the Cliffside Field. Representative copies of oil and gas leases covering the field contain typical grants of "oil and gas" or "oil and gas, casinghead gas, casinghead gasoline."[99] Helium as such is not mentioned in any of the leases.

The only private firm to extract and market helium as a separate commodity prior to enactment of the Helium Act Amendments of 1960 was the Girdler Corporation. It oper-

[95] LPX 203.
[96] LPX 11.
[97] LPX 10.
[98] LPX 15.
[99] LPX 216(b).

ated two extraction plants, one at Dexter, Kansas, and one at Thatcher, Colorado (Model Dome). It operated these intermittently between 1927 and 1934. Gas for processing in these plants was supplied by production under leases in the plant vicinity held by Girdler itself.[100] The gas processed at Thatcher was almost wholly non-combustible, containing 85 per cent Nitrogen, seven per cent Helium, and seven per cent Carbon Dioxide. By amendment in 1937, Ch. 895, 50 Stat. 885, to the Helium Act of 1925, Ch. 426, 43 Stat. 1110, the Secretary of the Interior was directed to purchase, if possible, all properties developed or constructed by private parties for helium production prior to passage of the amendment, September 1, 1937. The Girdler plants comprised the only private helium extraction operation in the country at that time, and were purchased by the United States in 1938. They were not at that time in operation, and had not been for approximately four years. The 1937 amendment did not forbid subsequent commercial helium extraction and marketing by private companies. No private firm or corporation undertook these ventures, however, until after the Helium Act Amendments of 1960.

At the commencement of World War II, thus, all helium extraction facilities were owned by the United States, and consisted solely of the Amarillo Plant. It constructed four plants during World War II, to meet the greatly increased helium demand for military requirements. The first was constructed at Exell, Texas, in 1943. Gas for both plant fuel and for helium processing was supplied from the Channing area of the West Panhandle Field under a contract of the

[100] LPX 216(c)(d).

United States with the Canadian River Gas Company (merged in 1951 into the Colorado Interstate Gas Company).[101] Wells supplying this production were drilled under a single lease granted by Lee Bivins dated May 1, 1923 covering "Oil & gas" in a 200,000-acre area.[102]

Later in 1943, the United States completed a second plant, at Otis, Kansas. Natural gas was furnished this plant, for both fuel and helium extraction, from several small area fields under contracts with the Producers Gas Company and Northern Natural Gas Company.[103] Additional supplies of gas were furnished by the Kansas-Nebraska Gas Company under a 1952 contract, supplying gas produced in Barton and Rush Counties, Kansas.[104] The third plant to be constructed was near Cunningham, Kansas, completed in 1944, gas again for both fuel and for helium extraction being supplied by the Skelly Oil Company from the Lyons Field.[105] Again, this gas was produced under typical leases of oil and gas.[106]

The last plant built by the United States to meet wartime needs was at Shiprock, New Mexico, known as the Navajo Plant, completed in March, 1944. Helium-bearing natural gas was first furnished this plant from a well named Rattlesnake 1-G, drilled by the Continental Oil Company under a 1923 lease granted by the Navajo Tribe, which conveyed to their original grantor "oil and gas deposits" in the described

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101 LPX 207.
102 LPX 216(e).
103 LPX 208, Helex 27; LPX 209, Helex 26.
104 LPX 211; Helex 28.
105 LPX 210; Helex 29.
106 LPX 216(g).

property and formations. Through a series of agreements,[107] the United States subsequently acquired the lessees' interest as to certain formations under that lease, and became itself a lessee-producer of helium-bearing natural gas under the 1923 lease. This lease was construed in *Navajo Tribe of Indians* v. *United States,* 364 F.2d 320 (Ct. Cl. 1966).[108] This gas contained 7.6 per cent helium, and was non-combustible due to a high nitrogen content.

The Navajo Plant was operated initially for only 18-19 days. Later, operations indicated the Rattlesnake supply was inadequate, and the United States entered into a number of later contracts for helium-bearing gas for processing. By 1955, the Rattlesnake Field having become depleted, the United States contracted with the Stanolind Oil & Gas Company (now Pan American Petroleum Corporation) for gas produced from what is identified as the Hogback Field in San Juan County, New Mexico.[109] It executed the next contract in 1959 with the Pan American Petroleum Corporation covering gas produced from the Navajo C-1 well.[110] It executed a gas supply contract for the Navajo Plant in 1962 with the Continental Oil Company, covering gas produced from the Table Mesa Field.[111]

The production of helium reached a wartime high of over 137 million cubic feet in 1944.[112] Immediately after the war, production dropped to approximately 63 million

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107 LPX 27.
108 See our discussion *infra,* page 77.
109 LPX 212; Helex 30.
110 Helex 31; LPX 214.
111 LPX 215; Helex 230.
112 LPX 112.

cubic feet in 1946, and later dropped still further to 54 million cubic feet. Accordingly, after the war, all government plants were closed except that at Exell, Texas. Excess production of helium from Exell was first stored in 1945 in the government-owned Cliffside reservoir. The Cunningham Plant was dismantled, and the remainder were placed on standby status.

Helium demand again commenced to increase in 1950, and the government plants at Amarillo, Otis, and Shiprock were placed back in operation in 1950, 1951, and 1953 respectively. By 1952, government production reached and exceeded the previous high of 1944. In 1957, to meet the rising demand, the capacity of the Exell Plant was enlarged from 60 to 240 million cubic feet, and the government thereafter undertook the construction of the last government-owned helium plant, at Keyes, Oklahoma. It was placed in operation in 1959. Gas for this plant was supplied by the Colorado Interstate Gas Company under a contract executed April 4, 1958.[113] It was to be produced from the Keyes Field in Oklahoma.

The contracts recited above comprise all of the gas purchase contracts in this country under which natural gas was purchased by the United States with the express contemplation that helium would be removed from it. No portion of the price to be paid for natural gas was separately and expressly attributed to its helium content until the 1958 Keyes contract. The prices in all contracts prior to 1958 were the prevailing market prices for natural gas for fuel markets at the time of their execution. The Lone Star contracts supply-

[113] LPX 213; Helex 32.

ing Experimental Plant No. 3 and Production Plant No. 1 at Fort Worth, Texas provided identical prices, though stated separately, for shrinkage resulting from the removal of helium, and shrinkage resulting from the use of gas for fuel, fifteen cents per Mcf. Contracts executed to supply the wartime plants at Exell, Texas, and at Otis and Cunningham, Kansas, all provided for payment of either seven or eight cents per Mcf for all gas processed and not returned after the extraction of helium. This total shrinkage was composed of not only the helium removed, but gas used for the generation of power and heat, i.e., fuel, hydrogen sulphide removed in the extraction process, and all other gas lost within the plant. Three of the four contracts supplying these plants recited the following respecting the extraction of helium:

> "WHEREAS, the processing of gas for helium extraction tends to improve its composition for use as fuel, because such processing not only removes the greater part of the helium, which has no fuel value, but also removes some portions of other inert gases contained in the helium-bearing gas. . . ."[114]

The 1955 Stanolind contract supplying the Navajo Plant, covering gas from the Hogback Field containing 7.5 per cent helium by volume, provided for payment of twelve cents per Mcf plus a three cent delivery charge. This gas was not efficient fuel gas, and contained about 450 Btu's.

It was in the 1958 Keyes contract, with Colorado Interstate Gas, that the United States agreed for the first time to a payment for helium-bearing gas on a basis other than solely for the volume of gross shrinkage in the plant.[115] The price

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[114] LPX 208 (Example).
[115] LPX 213; Helex 32.

was divided into two parts, a payment of 26 cents per Mcf for "all gas consumed in the plant as fuel and for all shrinkage resulting from processing in the plant," and in addition a four cent per Mcf fee denominated a "Processing Fee:"

> "6.2 *Processing Fee* — As compensation to the company for gas processing and helium extraction rights, and for providing gas deliveries at suitable pressure, volume, and helium content, *and for the helium extracted*, the United States shall pay the Company a gas processing fee on the total volume of gas delivered to the helium plant and processed for helium extraction. Said processing fee shall be 4 cents per thousand cubic feet for gas having a weighted average helium content of 2.0 per cent during the billing period. . . ." [Emphasis supplied.][116]

The contract provides further that "[I]f the weighted average helium content for the billing period is greater or less than 2.0 per cent, the processing fee shall be increased or decreased in accordance with the table attached hereto . . ." The average helium content of Keyes gas is two per cent by volume. This processing fee applies only to gas coming into the plant which is processed for helium removal, and is not paid when gas entering the plant is not so processed and is used merely for power.

At the time this contract was executed, Colorado Interstate purchased gas in the Keyes Field from some twenty-six companies or individuals, at a wellhead price approved by the Federal Power Commission (FPC) of fifteen cents per Mcf, which was adjusted due to low Btu content to twelve cents per Mcf, upon which royalties were paid.[117] In addition, Colorado Oil and Gas Company, a wholly-owned sub-

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[116] Ibid.
[117] LOX 60.

sidiary of Colorado Interstate, owned approximately one-half of the leasehold interests in the field, and Colorado Interstate paid this subsidiary the 12 cents adjusted price. Thus, for gas sold to the United States and used by it, Colorado Interstate paid, at the time the contract was executed, 12 cents per Mcf at the wellhead, and received 26 cents per Mcf for the gas used by the United States.

It is disputed whether the additional four-cent "processing fee" constitutes a payment for helium. Dr. Seibel, then with the Bureau of Mines, stated that the processing fee covered a "number of items which the government felt were quite valuable," including a guarantee of ownership of helium, a limitation on daily gas withdrawals from the field, obligations of the seller to minimize dilution of the helium content of the gas, an agreement to maintain fixed delivery pressure at the plant inlet regardless of variations in field pressure, and the exclusive right to process all Keyes gas for helium extraction.[118] Mr. Henry Wheeler of the Bureau of Mines characterized this fee thus:

> "In effect, this four cent processing fee assigns a market value of $2.00 a thousand cubic feet. Whether it was intended to do that or not that is initially what we got for the four cent processing fee, helium at $2.00 a thousand cubic feet."[119]

The two-dollar figure mentioned above does not appear in the Keyes contract. It may, however, be calculated therefrom. The Keyes gas constitutes two per cent helium by volume. To obtain one thousand cubic feet of helium, thus, it is neces-

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[118] Tr. 63:6038-6039.
[119] Tr. 66 6310.

sary to process 50,000 Mcf of gas. The processing fee for that quantity, at four cents per thousand cubic feet, equals two dollars. In other words, the contract requires that the United States pay the company $2.00 for the right to process sufficient gas to yield one thousand cubic feet of helium.

The next contract following the Keyes agreement was executed by the United States with Pan American on June 12, 1959, supplying natural gas with about 5.6 per cent helium by volume, to the Navajo Plant.[120] It provided for payment as follows:

"10.1 The price of gas delivered and sold by Company to the United States during the terms and under the conditions of this agreement, shall be nineteen (19) cents per one thousand (1,000) cubic feet, which price is made up of the following:

Helium	11.6 cents
Hydrocarbons	1.8 cents
Delivery	5.6 cents
	19.0 cents"

Mr. Wheeler of the Bureau testified that this attribution of 11.6 cents to the helium content of the gas was based upon the "formula" established in the Keyes Plant: that the value of two cents per one per cent of helium content was applied to a gas containing 5.8 per cent helium, resulting in a price of 11.6 cents per Mcf.

The two dollar figure referred as the "Keyes formula" has been considered in the United States contracts with the Helex companies. The formula is discussed in connection with our analysis of such contracts.

[120] LPX 214; Helex Ex. 31.

HELIUM CONSERVATION

Helium produced prior to 1960 was used primarily to meet current demands of both governmental and civilian users. These demands had risen sharply during the 1950's. From 1948 until 1956, helium sales increased five-fold.[121]

This increase was due to the rapidly multiplying uses being developed for helium.

Its first large-volume use was as a lifting gas for lighter-than-air craft, commencing immediately after World War I. Prior to World War II, small but important quantities were also used in diving and submarine operations, and for medical purposes. During World War II, it became important in atomic energy and as a shield in arc-welding of such metals as magnesium, aluminum, and stainless steel. It is essential for much nuclear and cryogenic research, and its industrial applications are more numerous than ever before.

The conservation of helium was particularly a matter of federal concern. In 1955, 70 per cent of all helium produced by the Bureau was used directly by federal agencies, particularly the Department of Defense and the Atomic Energy Commission. At that time, projects involving over $6,000,000 were estimated to depend upon continued helium supplies. Over half of the remaining 30 per cent was used by private purchasers in work under government defense and atomic energy contracts.

As increasing helium demands threatened to outstrip the production capacity of the Bureau, concern arose that sudden

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[121] LPX 43, Report prepared in 1956 by Dr. C. W. Seibel, then Asst. Director of the Bureau of Mines, in charge of helium, titled "Helium—Uses—Requirements—Production—Conservation—Costs," p. 2.

defense mobilization requirements could not be met, and attention turned to both providing increased production capacity and the use of other helium sources, including the Hugoton and Panhandle Fields. A 1953 report of the Office of Defense Mobilization reported that in 1952, "more than seven million cubic feet of helium a day was going out of the western part of the Texas Panhandle Field in nine pipelines . . ."[122] Further,[123] a report prepared in 1954 for the Bureau of Mines by a private engineering firm, called the Stone & Webster Report, was concerned primarily with developing adequate reserves and production capacity to meet any sudden military demand.[124] By 1956, the concern for helium was twofold, both to meet mobilization needs and to conserve an increasingly valuable and wasting natural resource.

Helium carried in natural gas to fuel markets does not burn, of course, and simply passes into the atmosphere at the burner tips. It constitutes approximately 1/200,000th part of the atmosphere and no economical method has been developed for its recovery from the air. Carried in the natural gas, it produces no heat. Moreover, it reduces the Btu yield of a gas stream by absorbing heat itself, sufficient to raise its temperature to that of the burner. The 1954 Stone & Webster Report stated that under then current natural gas production schedules, approximately two-thirds of the helium supplies would be dissipated within the next twenty years.

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[122] LOX 40, p. 12.
[123] LOX 42.
[124] LOX 42; See also a 1955 Bureau of Mines Report, "Helium—a report for the Secretary of the Interior." LOX 47.

In 1957, a helium policy "working group," headed by then Undersecretary of Interior O. Hatfield Chilson, was constituted to determine how a national preservation policy should be implemented, and its cost. In its report in 1958, referred to as the Chilson Report, that group concluded that the "only practical method of conserving the large volumes of helium currently wasted to the atmosphere is to construct and operate helium plants to extract the helium from helium-bearing natural gas before it is transmitted to fuel markets . . ."[125] The basic plan of conservation was stated thus:

> "Ninety-nine per cent of the known helium-bearing natural gas resources in the United States is concentrated in four fields: (1) the Hugoton field of Texas, Oklahoma, and Kansas; (2) the Panhandle field of Texas; (3) the Keyes field of Oklahoma; and (4) the Greenwood field of Kansas. All of these fields have been developed by private companies to supply natural gas to fuel markets, and they are presently being produced for that purpose. So far as the gas companies are concerned, the helium is a minor impurity, and no effort is made to remove it. Consequently, the helium is transmitted to fuel markets along with the rest of the gas, and it eventually passes through the gas burners into the atmosphere without serving any useful purpose.
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> "The Hugoton, Panhandle, Keyes, and Greenwood fields contain approximately 119 billion cubic feet of potentially recoverable helium. About 60 per cent of this helium could be recovered in 13 helium plants located at strategic points on pipelines leading from the fields. . . ."[126]

The report also suggested helium thus recovered could be stored at Cliffside until withdrawn and refined to meet current demands of the United States and private companies.

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[125] LPX 56, p. 10.
[126] LPX 56, pp. 10-11.

The role of private industry in any helium program to be undertaken was considered as early as 1954, in the Stone & Webster Report, in which it was discouraged as inconsistent with the United States' paramount interest in helium. Again in 1957, Dr. Seibel wrote that "[p]rivate industry participation in the direct production of helium at this time will jeopardize future supplies of the important strategic commodity—helium, cost the taxpayers many millions of dollars annually, require the establishment of a Government commission to regulate the industry and involve heavy subsidies.[127] In 1958, however, the Chilson report recommended that private industry be given an opportunity to participate in the helium conservation program, but that a "completely private helium industry," resulting in promotion and sale of helium without regard to beneficial end uses, be avoided. Accordingly, it recommended that "the most satisfactory form of private participation would involve the purchase by the Government of all of the helium produced privately."[128] The Chilson Report was submitted to President Eisenhower and approved. The President thereupon promulgated a National Helium Conservation Policy, announced by the Secretary of the Interior on May 1, 1958.[129] In this press release, the Department stated: "Recovery of the helium from gas going to fuel markets will be accomplished in up to 12 plants, . . . to be constructed in or near the fields that produce the gas."

Thereafter in 1958, the Interior Department proposed

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[127] LPX 45.
[128] LPX 56, p. 15.
[129] LOX 81.

legislation to Congress for the implementation of this conservation policy. This was not acted upon, and redrafted proposals were submitted again in 1959. With certain alterations, on September 13, 1960, the Helium Act Amendments were enacted, amending and replacing the Helium Act of 1925.

The 1925 Helium Act, Ch. 426, 43 Stat. 1110, was not itself a conservation act. It authorized the Secretary of the Interior "for the purpose of producing helium with which to supply the needs of the Army and Navy and other branches of the Federal Government . . . to acquire [helium-bearing] land or interest in land . . . where necessary, when helium can not be purchased from private parties at less cost . . ." The Act provided that all branches of the federal government could fill their helium requirements by purchases from the Bureau at "actual cost of said helium to the United States, including all expenses connected therewith . . ." The leasing of surplus helium to private parties was authorized. An amendment in 1927, Ch. 355, 44 Stat. 1387, authorized the sale or leasing of a maximum of 5,000 cubic feet of non-surplus helium annually to aid scientific and commercial development. In 1930, the Comptroller General issued a ruling requiring the Navy Department and perhaps all other federal branches, to meet their helium needs by purchases from the Bureau. By Act of September 1, 1937, Ch. 895, 50 Stat. 885, amending the 1925 Helium Act the Secretary of the Interior was directed "if possible under the terms hereof" to acquire all properties developed or constructed by private parties prior to that time for helium production. It was pursuant to this authority as we said that the Girdler

Corporation plants were purchased by the United States. The 1937 amendments also authorized for sale of helium for medical, scientific, and commercial purposes which was not needed for government use, such sales to be at "reasonable prices . . . based upon the cost of acquiring, developing, maintaining, and operating the Government properties . . ."[130]

The 1960 Helium Act Amendments, 74 Stat. 918, 50 U.S. C.A. §§ 167 et seq., authorized the Secretary of the Interior to enter into long-term contracts for the acquisition, processing, transportation or conservation of helium, not exceeding twenty-five years. In addition, he was given the power to acquire, by eminent domain, helium contained in helium-bearing natural gas and so much of such gas as is necessarily removed in the extraction process, if he were unable to acquire helium otherwise upon reasonable terms and at the fair market value. The Amendments provided a new basis for establishing the price of helium sold by the Bureau. Whereas under the 1937 amendment, the price was to be based on the actual cost of helium to the United States, including all expenses connected with its production, the new price under the amendment was to be adequate to recover, within twenty-five years, all funds expended in the entire conservation program. This price was subsequently set by the Secretary at $35.00 per Mcf, the price at which helium is sold to both federal and non-federal users. The Amendments required that all contracts made by the Secretary for the purchase of helium from private plants contain

[130] See LPX 32, Fig. 4, for graph outlining charges for helium to both federal and non-federal users.

provisions forbidding the sale of helium to any purchaser other than the United States at a price lower than the lowest price paid by the United States for helium produced from any private plant. The Amendments required further that all agencies of the federal government purchase their major requirements of helium from the Secretary, to the extent that supplies were readily available.

UNITED STATES HELIUM CONTRACTS

In 1960, directly after enactment of the Helium Act, the Bureau of Mines began to solicit the interest of private industry.

The number of parties who were in positions which permitted them to participate in the conservation who had the financial ability to perform a large government contract, was necessarily limited. Participation required that the contractor have in his control or access to, large volumes of gas with sufficient helium content to permit economical extraction, and in addition, ownership of such helium-bearing gas streams, or at least the right to extract helium therefrom.

On October 11, 1960, the Bureau sent identical letters to 377 persons and firms who had indicated interest in the program.[131] On October 25, 1960, the Department promulgated guidelines by which proposals were to be evaluated.[132] The Bureau judged proposals on four criteria: how much helium conservation could the proposal assure, how soon would it be accomplished, the probable cost of such con-

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[131] Helex 170; Tr. 66:6347.
[132] LOX 120; Helex 171.

servation, and the ability of the company to perform as proposed.[133]

Of fourteen proposals received by the government, twelve proposed to build and operate helium extraction plants.

After exploratory interviews with each of these twelve firms conducted by a five-man board constituted to evaluate and select companies for actual contract negotiations, four companies were selected on March 6, 1961, three being parties to these cases, Cities, Northern, and Panhandle.

Negotiations with these firms led ultimately to execution of contracts with their respective helium extraction subsidiaries: with Helex, Inc. (now Northern Helex, Inc.) on August 15, 1961; with Cities Service Helex on August 22, 1961; with National Helium on October 13, 1961. On August 21, 1961, the Bureau renewed its request for proposals from private industry to be submitted by September 15. Phillips thereupon submitted a new or altered proposal, which led to contract executed November 13, 1961.

From the announcement of the program in May, 1958, through execution of the last contract implementing it, the Bureau of Mines and Interior Department issued a total of 11 press releases, announcing every major step toward implementation of the program.[134]

At no time during the formulation, promotion, or implementation of the conservation program did either the Bureau or the Department seek to discourage participation by any member or segment of the petroleum industry, including both pipeline companies and producing companies.

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[133] LPX 91, App. 21.
[134] Helex Ex. 59, 161, 166; LOX 117, 119, 120, 122, 127.

Lessee-producers allege that representatives of the Bureau of Mines commenced preliminary discussion and negotiations with Northern, Cities, and Panhandle and others controlling large volumes of helium-bearing gas, as early as 1958, long before enactment of the Amendments in 1960.

The evidence introduced to establish these negotiations[135] simply does not do so. Representatives of Northern and Cities consulted with the Bureau concerning the possibility of their participation.[136] No negotiation of contracts was conducted by the Bureau with any company prior to 1961, following public solicitation of proposals from private companies.

Lessee-producers complain of alleged pre-selection of sites for helium extraction plants. Commencing in 1956, discussions of alternative approaches to helium conservation within the Bureau contain repeated references to a projected twelve or thirteen plants, which could recover 60 percent of the helium transported from the Hugoton area in natural gas carried to and wasted in the market. These sites were but recommendations, and no site selection was imposed upon any party seeking to participate in the program.[137]

Copies of a May 1, 1958, press release were sent to Cities Service Gas and Panhandle on May 6 after its issuance accompanying requests for gas samples and data regarding gas flows, pressures and seasonal variations in lines owned or controlled by these companies. The evidence discloses no

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[135] LPX 57, 73, 80, 117, 118, 127, 128, 129, 145, 146 and 173; LOX 84; Tr. 79:7571.
[136] LPX 80, 117, 118.
[137] Tr. 67:6376.

preferential treatment given these or any other companies in announcement of conservation plans.

Helium which the United States purchases from each of the four extraction contractors is contained in a crude helium-gas mixture, which the contracts define as "the gaseous product resulting from the helium extraction operation . . . [and] comprised of helium predominantly together with other constituents of the natural gas." In actual operations, the delivered gas mixture consists of about 70 per cent helium and 30 per cent nitrogen. This gas mixture is transported through a small diameter pipeline to Texas, where it is stored in the Cliffside underground reservoir. When needed, it is withdrawn and refined, prior to sale to about 99.99 per cent purity.

The prices stated in the contracts apply only to the volumes of helium *contained in* the helium-gas mixture, and not to the mixture itself.

The contract with Helex, Inc., provided for an initial unit price of $11.24 per Mcf for helium contained in the crude helium gas mixture delivered to the United States. Northern Helex produces this helium mixture in a plant at Bushton, Kansas, on pipelines of Northern Natural leading from the Hugoton area, commencing operations in December, 1962.[138]

The Cities Service Helex contract provided an initial price of $11.74 per Mcf which price has risen, pursuant to adjustment provisions in the contract, to approximately $12.23 at the time of trial. This helium is extracted at a plant constructed in Grant County, Kansas, on pipelines of Cities Service

[138] LPX 105

Gas, leading from the Hugoton area, operations commencing in June, 1963.[139]

Under the National Helium contract, the United States agreed to a price of $11.78 per Mcf of contained helium, which had risen to approximately $12.35 at the time of trial.[140] This helium is extracted at a plant at Liberal, Kansas, located on pipelines of Panhandle leading from the area, commencing operations in July, 1963.

The contract with Phillips provided a price of $10.30, which, like the other contracts, is subject to escalation, although the present price is not disclosed. Helium sold thereunder is extracted in two plants, one in Sherman County, Texas and the other at Dumas, Texas, these commencing operations in December, 1962 and April, 1963, respectively.

Under each of these contracts, the United States is obligated to purchase the total helium production of each company for a period of twenty-two years, this obligation subject to the limitation that the United States' purchases are not required to exceed specified annual dollar maxima: $9,500,000 in the Helex contract; $9,100,000 in the Cities Service Helex contract; $15,200,000 in the National Helium contract; and $13,700,000 under the Phillips contract.

The United States negotiated the above unit prices in each contract on the basis of costs comparable to those it would incur in a government-owned plant located at the same place and in the same circumstances, adding thereto those costs of doing business applicable only to private industry,

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[139] Tr. 74:7070; LPX 106.
[140] Tr. 71:6789.

the cost of taxes, insurance, and a return on private capital. As one of the costs of operating a government-owned plant, the United States included in its cost build-up a payment of $2.00 for helium contained in natural gas delivered at the extraction plant for processing.[141] This separation of two dollars of the unit price as applicable to the cost of helium contained in natural gas to be processed for its extraction does not appear in any contract itself. It appears only in evidence which reflects the manner in which the United States reached its own cost estimates to form a basis for actual contract negotiation. The figure reflects no more than the estimate of the Bureau of Mines of the cost it would probably incur, in the operation of its own extraction plant, to acquire helium extraction rights from a natural gas stream.

The contract unit price in each case is stated in two parts, Part One representing the cost of natural gas to the extraction company. [E.g., in the Cities Service Helex contract, it represents the "cost in the field of shrinkage and fuel gas," these being the "shrinkage in the volume of natural gas occurring as a result of the helium extraction process . . . and any such natural gas consumed as fuel. . . ." A similar provision is contained in the National Helium contract.]

Part Two, the greater part of the price, represents the balance of the unit price. Respecting the total unit price, the contracts provide:

. "Payment for the helium-gas mixture sold and purchased hereunder shall be calculated and made on the basis of the contained helium therein. The unit price specified herein represents only the value of the contained helium and is applicable only to such contained helium. For the purposes

[141] See, e.g., LPX 91, App. 33.

of this contract, no value has been ascribed to gaseous products other than helium in the helium-gas mixture sold and purchased hereunder. Notwithstanding the foregoing, it is expressly understood and agreed by both parties hereto that payment in accordance with this article shall constitute full and complete payment for helium, nitrogen, methane, and any and all other constituents of the helium-gas mixture."[142]

The two parts are based on separate adjustment scales, Part One on the basis of the extraction companies' cost of gas, and Part Two according to the wholesale price index, exclusive of food and farm products.

The question of title to helium arose during negotiations. In each contract, the seller warranted title to the helium-gas mixture, or agreed to indemnify and hold harmless the United States for all claims of ownership by third parties to said mixture. The ultimate cost each seller might have to bear as a result of failure of title is limited, however, by provisions that the seller be reimbursed by the United States for all payments made in satisfaction or settlement of ownership claims to helium, to the extent that such payments exceed approximately $3.00 per Mcf of helium.

The contracts provide, in addition, that should seller's title to helium fail and seller cannot perfect it, that the United States is entitled to terminate the contract and to purchase the extraction plant itself.

Two contracts are in evidence under which gas is acquired for the extraction of helium therefrom, in which the two-dollar figure derived from the Keyes formula actually appears as payment for helium, both executed in 1965. Under

[142] E.g., LPX 107, p. 9.

a "Gas Exchange Agreement" between Phillips and Pioneer Production Company, Pioneer delivered to Phillips certain volumes of raw natural gas produced from the West Panhandle Field, Pioneer granting to Phillips the right to process the gas for helium extraction in the following language:

> "*Section 1.* Subject to the other provisions hereof, Phillips is granted the right to process all gas delivered to Phillips . . . and to remove any constituents therefrom so long as the gas which Phillips redelivers at Delivery Point 'B' complies with the specifications set forth in Section 2 . . . ."
>
> "*Section 2.* As total consideration for such processing rights Phillips agrees to pay Pioneer a price of two dollars ($2.00) per Mcf for the Helium contained in the raw gas attributable to the residue gas Phillips delivers at Delivery Point 'B.' "[143]

So far as appears, this helium is subject to sale to the United States under Phillips' contract.

Likewise, under a gas sales agreement executed April 1, 1965, between Colorado Interstate Gas Company and Alamo Chemical Company, a wholly-owned subsidiary of Phillips, Colorado Interstate granted to Alamo the right to extract helium and liquefiable hydrocarbons, from gas produced principally from the Greenwood and Sparks Fields in Kansas. Alamo agreed to pay Colorado Interstate "Two Dollars ($2.00) per Mcf for the contained helium extracted and saved at the Greenwood Plant, as determined under Article VII hereof."[144]

The foregoing history and development of helium extraction from natural gas constitute basic facts which we must

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[143] Helex Ex. 112, p. 4.
[144] Helex Ex. 113, p. 26.

consider in determining landowners and lessee-producer contentions of their rights to the fund and landowners claims against the United States.

We turn to the Leases.

THE LEASES

As indicated at the outset of the memorandum, both landowners and lessee-producers argue that the extraction companies have no right, title or interest in the helium contained in the helium-gas mixtures delivered to the United States, or in any other non-hydrocarbon portion of that mixture. The landowners claim that helium did not pass to their lessees under the oil and gas leases by virtue of which natural gas has been and is being produced from their properties. The lessee-producers oppose this position, and urge that helium did in fact pass under those leases, but that it passed no further, i.e., that it did not pass to the pipeline companies under the gas purchase contracts by which they acquire natural gas from which helium is extracted.

We turn first to the arguments of the landowners, most of which are based primarily upon the granting language of the leases. Prior to trial, Ashland moved for summary judgment on the issue that oil and gas leases convey helium as a matter of law. This motion was overruled, in order that the court might consider evidence bearing upon the intention of the parties. In *Whitebird* v. *Eagle-Picher Company,* 390 F.2d 831 (10th Cir. 1968), the Court stated thus:

> "The vital and primary issue . . . turns upon the interpretation of the language of the leases. It has been observed that today's leases are generally both a conveyance and a con-

tract and therefore, that it is 'more likely that a written lease is intended to be a complete and operative integration of agreement.' [Footnote omitted.] 3 Corbin, Contracts § 587, at 508 (1960): 'Even when a contract has been fully "integrated" in the form of written words, those words never have a single, necessary, legally imposed meaning, unaffected by the other words and acts of the parties whether antecedent or subsequent. Those other acts and words are admissible in evidence, to discover both the meaning that one party intended and the meaning that the other party received.' Id. § 538, at 71. Therefore, although evidence which will vary, alter or contradict the express written provisions of the written leases cannot be considered, American Crystal Sugar Co. v. Nicholas, 124 F.2d 477 (10th Cir. 1941), evidence which aids in the interpretation of the leases' language and indicates the meaning the parties intended and received may be considered. [Citations omitted.]" 390 F.2d at 834.

Accordingly, the court has received and considered much evidence of the development of gas production in the Hugoton gas area, leasing and production practices, and of the composition of natural gas, much of which has been considered in foregoing sections. Such matters are properly considered under the Restatement of Contracts, § 230, which provides as follows:

"The standard of interpretation of an integration, except where it produces an ambiguous result, or is excluded by a rule of law establishing a definite meaning, is the meaning that would be attached to the integration by a reasonably intelligent person *acquainted with all operative usages and knowing all the circumstances prior to and contemporaneous with the making of the integration*, other than oral statements by the parties of what they intended it to mean." [Emphasis supplied.]

See *Southwest Kansas Oil & Gas Co.* v. *Argus Pipe Line Co.*,

141 Kan. 287, 291, 39 P.2d 906, 909 (1935). We turn to the language of the leases themselves.

Representative forms under which each named lessee-producer produces helium-bearing natural gas have been compiled with tabulations of acreages covered thereunder. The parties have stipulated that these compilations and tabulations are correct as to the named lessee-producers.[145]

Many thousands of leases are involved herein, with over 150 different printed forms. Over seventy-five per cent of the leases have been executed since 1940. Leases held by named lessee-producers contain a total of fifty different granting clauses.[146] Six of these clauses are found in leases covering over ninety per cent of the acreage involved:[147]

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[145] "The number of leases on each lease form and the number of acres covered by each form are correctly stated and shown in the forms and statements filed in this action or related actions by named party lessee-producers. The unit designations, gas unitization agreements, pooling orders (or equivalent), gas division orders and stipulations of royalty ownership and the like attached to said statements are representative of the forms used by the respective parties submitting the same. Such forms and statements may be received in evidence in lieu of the introduction of each original instrument." (Pretrial Order, p. 11).

[146] LOX 838; see also LPX 237.

[147] LOX 838, Schedules II and III.

KANSAS AND OKLAHOMA LEASES

	Percentage of Acreage
"oil and gas, casinghead gas and casinghead gasoline"	69.688
"oil, gas, casinghead gas, casinghead gasoline and all other gases and their respective constituent vapors"	10.132
"oil and gas"	7.144
"oil, distillate, gas, casinghead gas, casinghead gasoline and all other gases and their respective constituent vapors"	3.311
	90.275

TEXAS LEASES

"oil and gas"	39.860
"oil, gas and all other minerals"	25.517
"oil, and gas, casinghead gas and casinghead gasoline"	14.545
"oil, gas, and all other minerals"	14.168
	94.090

Leases covering 99.99 per cent of the acreage involved herein contain the words "oil" and "gas." This conjunction of terms forms the heart of landowners' argument.

Of the fifty different granting clauses, landowners regard only five as conveying helium as part of the gas granted therein:

> "(21) oil, gas, sulphur and all other minerals (whether or not similar to those mentioned)."

"(42) oil, gas, distillate, condensate, uranium, thorium, salt, sulphur and all other minerals, whether similar or dissimilar to those mentioned."

"(44) oil and gas, including casinghead gas, casinghead gasoline, condensate, and all related hydrocarbons and including all products produced therewith."

"(48) oil or gas, or both, including, but not as a limitation, casinghead gas, casinghead gasoline, gas-condensate (distillate), and any substance, whether similar or dissimilar, produced in a gaseous state."

"(50) oil, gas, gas condensate, gas distillate, casinghead gas, casinghead gasoline, and all other gases and their constituent parts and other minerals produced in connection with oil and gas operations hereunder."[148]

Their interpretation of these five clauses rests upon language therein which specifically covers all gaseous substances without regard to their similarity or dissimilarity to "gas" in the phrase, "oil and gas."

The word, "gas," has two different meanings with which we are concerned. As a general term used in a physicist's sense to describe a state of matter, it is defined typically as an "aeriform fluid having neither independent shape nor volume but tending to expand indefinitely."[149] It is also used to describe natural gas, which is defined typically in mining and petroleum industry glossaries as "a mixture of gaseous hydrocarbons found in nature . . ."[150]

Nothing in the history of the word "gas" itself supports the argument that it defines only gaseous hydrocarbons. The word "gas" was coined in the early 17th century by a Dutch chemist, J. B. Von Helmont, from the Greek word "chaos"

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[148] LOX 838, Schedule I.
[149] LPX 241.
[150] Ibid.

to signify a "spirit not capable of being coagulated." It later came to mean an "aeriform fluid" used synonymously with air, and was subsequently restricted to permanently elastic fluids such as oxygen and hydrogen, as opposed to vapors, such as steam. In the 19th century, it became parlance for a mixture of carbureted hydrogen used to give heat and light, i.e., artificial gas. Gas as used to define natural gas, did not appear as a dictionary entry until 1914, after which time natural gas was commonly described as combustible gas formed in and issuing from the earth's crust. The term, "natural," became affixed to gas to differentiate its superior fuel and illuminating qualities from artificial gas.[151]

Landowners' arguments that the term, "gas," as it appears in the leases is limited to gaseous hydrocarbons are fivefold. We treat each separately.

First, landowners argue that the Kansas Supreme Court has ruled, albeit by way of dicta, that helium is not conveyed by mere grant of "gas" and that this Court is bound thereby. In *Gilmore* v. *Superior Oil Co.*, 192 Kan. 388, 388 P.2d 602 (1964), the Court stated:

> "Construction of oil and gas leases containing ambiguities shall be in favor of the lessor and against the lessee. (2 Summerson Oil and Gas, perm. ed., § 372, p. 485; *Stady* v. *The Texas Company*, 150 Kan. 420 Syl. ¶ 2, 94 P.2d 322.) It is puzzling to understand why the above textwriter had such difficulty with this rule for the reason that the lessee of any oil and gas lease usually provides the lease form or dictates the terms thereof, and if such lessee is desirous of a more complete coverage of the marketing of oil, gas, liquid hydrocarbons, or even helium gas, which has recently been found to exist in the minerals underlying the

[151] Tr. 12:1092 et seq.

> vast Hugoton field, the lessee has the opportunity to protect itself by the manner in which it draws the lease. Much more could be said on this point but extension of the discussion would be pure dictum and of no benefit to the bench, the bar, or the oil and gas industry." 192 Kan. at 391.

Conceding the foregoing is but dicta, landowners assert that this constitutes a clear and intentional statement by the Supreme Court of Kansas that an oil and gas lease does not convey helium unless it expressly so provides, citing *Curtis Publishing Company* v. *Cassel,* 302 F.2d 132 at 135 (10th Cir. 1962); *Whitaker* v. *Texaco, Inc.,* 283 F.2d 169 at 174 (10th Cir. 1960); *Jess Edwards, Inc.* v. *Goergen,* 256 F.2d 542 (10th Cir. 1958).

In each of the cited cases, the court held that federal courts, in diversity cases, must follow a "clear and unequivocal exposition of the law" in state court decisions, and that the force of statements could not be disregarded merely because they were dicta, and not necessary to the decision, following *Hawks* v. *Hamill,* 288 U.S. 52, 53 S.Ct. 240, 77 L.Ed. 610 (1933). We do not, of course, question the rule. We cannot concede its applicability here. The cited statement from the *Gilmore* case is in no way a clear and unequivocal statement that the meaning of "gas" in an oil and gas lease is ambiguous as to the coverage of any gaseous constituent in the reservoir.

Failing this, landowners argue that nonetheless, the word "gas" is ambiguous, and that such ambiguity must be resolved against the lessee. The alternative meanings alleged to constitute this ambiguity are the so-called "physicist's meaning," descriptive of a state of matter, and an alleged

industry usage of the term "gas" to mean a mixture of gaseous hydrocarbons. Evidence offered to establish this usage simply failed to do so. Virtually no naturally-occurring gas in underground reservoirs exists in the entire Hugoton and Panhandle fields which conforms to this alleged usage. It was stipulated that in all instances, the gas which comes out of the wells is a continuous uninterrupted stream of gas emanating from the wellhead and remains such during its transmission to the helium extraction plants of each plaintiff extraction company.[152] No natural gas company, pipeline or producer, in the Hugoton area handles any unprocessed natural gas which is a physically and chemically pure hydrocarbon mixture. We cannot accept, as an industry usage, a definition which is so remote from the realities of that industry.

We must find, therefore, that the word "gas" as it appears in oil and gas leases is not ambiguous by reason of the alternative meanings recited above. We would note that did such usage exist, there would be no reason to apply it to oil and gas leases. By landowners' own evidence, from a random sampling of 984 leases, it appeared that 65 per cent of the sample was taken by independent lease brokers, and not by representatives of the producing industry.[153]

Thirdly, landowners rely upon the rule of *ejusdem generis,* whereby a general term in a series may be given a limited meaning by other specific words therein. Oil, it is argued, is synonymous with petroleum, which means liquid hydrocarbons; it is followed in 99.99% of the leases by

[152] Dkt. 59, W-3009.
[153] LOX 794; Tr. 4:284 et seq.

gas, a term which, in its most general application, signifies any substance existing in a gaseous state regardless of composition. Being conjoined with oil, it cannot be held to have been used generally, but specifically, to convey only those gases similar to oil, i.e. those hydrocarbon compounds in a gaseous phase.

This argument was raised and rejected in *Navajo Tribe of Indians* v. *United States,* 364 F.2d 20 (Ct. Cl. 1966), wherein the court states:

> "Plaintiff argues that, under the rule of *ejusdem generis,* the term 'gas' in the granting clause is limited to hydrocarbons, i.e., gases associated with oil. We see no reason to apply *ejusdem generis* to a phrase such as 'oil and gas,' and plaintiff cites no authority for doing so." 364 F.2d at 327.

We likewise think the argument is without merit. The word "oil" used in its ordinary, common, general and popular sense in oil and gas leases refers to crude oil as it is produced from the mouth of the well. See *Hammett Oil Co.* v. *Gypsy Oil Co.,* 95 Okla. 235, 218 Pac. 501 (1921). There is no evidence that crude oil is a physically and chemically pure mixture of hydrocarbon compounds. That oil, in the sense of petroleum, for which landowners contend, is a mixture of hydrocarbons and other substances is a fact of which the court may take judicial notice. Petroleum is defined in Webster's Third New International Dictionary as follows:

> "1. An oily flammable bituminous liquid that in the crude state often has a very disagreeable odor and may vary from almost colorless to black but is usu. of a dark brown or greenish hue and sometimes fluorescent, that occurs in many places in the upper strata of the earth either in seepages or in reservoir formations from which it is obtained by drilling and pumping if necessary, that is essentially a complex mixture of hydrocarbons of different types with

small amounts of other substances (as oxygen compounds, sulfur componuds, nitrogen compounds, resinous and asphaltic components, and metallic compounds), that is sometimes classed as paraffin-base, asphalt-base or naphthene-base, or mixed base. . . .

2. any of various substances (as natural gas or shale oil) similar in composition to petroleum."

We must conclude, first, that resort to the rule of *ejusdem generis* is neither appropriate nor justified to determine the meaning of the word "gas," and secondly, were it properly applicable, the term "oil" provides no limitation upon the kinds of gases conveyed under the leases.

Moreover, the rule of *ejusdem generis* is but "merely a phase of the more general rule that the contract must be interpreted as a whole," and "frequently must yield to other more pressing considerations." 3 Corbin on Contracts, § 552. Literal application of the rule was sought *In re Estate of Trester*, 172 Kan. 478, 241 P.2d 475 (1952), to include clay with a grant of "oil, gas and other minerals." The Court rejected this argument:

"It is true that in classifying things as animal, vegetable and mineral, everything that goes to make up the earth comes within the general classification of minerals. But this general classification cannot be used for the interpretation of instruments granting specific rights. With respect to that matter the term 'mineral' is not a definite one capable of universal application. It is suceptible to limitations according to the intention of the parties using it, and in determining its meaning in a specific instrument not only the language of the instrument in which it occurs but also the relative positions of the parties interested and the substance of the transaction which the instrument embodies must be taken into account." 172 Kan. at 482-483.

"[T]he rule of adjusdem generis [sic] is not properly applicable where the result would be contrary to the plain and clear intention of the parties." *Cronkhite* v. *Falkenstein,* Okla., 352 P.2d 396 (1960).

The landowners introduced much testimony to show precisely that landowners had *no* intention whatever respecting helium, and moreover that "gas" or "natural gas" would evoke no association with helium. Dr. Bergen Evans, a noted professor of English, etymologist and lexicographer, canvassed a compilation of 270 dictionary and encyclopedia entries concerning "gas" and "natural gas"[154] and noted the relative infrequency with which helium is mentioned in relation to either term. He concluded thus:

> ". . . I conclude as a lexicographer, not as a geologist or an oil man or a signer of leases, simply as one who has examined the words, on the basis of the 270 dictionary and encyclopedia entries concerning 'gas' and 'natural gas'. . . the said entries appearing over a period of more than fifty years, that the ordinary man could not be reasonably expected to connect 'helium' with 'natural gas.' "[155]

He also examined a series of newspaper searches, one covering certain Kansas newspapers, particularly in Liberal and Hutchinson,[156] and another covering newspapers published in Guymon, Oklahoma,[157] between 1920 and 1960. In the Kansas newspapers, helium was mentioned in 163 items over this forty year period, and in 36 items in the Oklahoma newspapers.[158] By extrapolation to demonstrate

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154 Helex 128, Parts 1-3.
155 Tr. 13:1160.
156 LOX 776 thru 786.
157 LOX 788.
158 Tr. 11:904; 12:1040.

the lack of association between the two words, he found that the word "gas" appeared singly or in the phrase "natural gas" approximately 213,302 times, and helium, 1,010 times. He concluded, thus, that "the word 'helium' was a very rare word; that the word 'gas' was an exceedingly common word with the implication that 'gas' was very much in the thought of the people in this area at that time, that 'helium' rarely was."[159]

Again, from an examination of a collection of 1,042 articles or excerpted items from 28 daily newspapers and 22 periodicals in which the word "helium" appeared,[160] he again concluded that "the association of 'helium' with 'natural gas' or the word 'gas' in the sense of 'natural gas' has over the last 65 years been exceedingly rare."[161]

Dr. Evans' opinion that the word "gas" did not connote helium to the average lessor or landowner in Southwestern Kansas, Western Oklahoma or Northern Texas, between 1916 and 1960, is based upon the statistical incidence of the two words and the relative frequency of their association in dictionaries, encyclopedias, area newspapers and selected magazine articles.

The evidence seems clear that gas did not connote helium specifically to the average lessor, and that no landowner specifically contemplated helium in granting rights to produce "gas." Similarly, however, there is no evidence that any landowner regarded oil as a physically pure mixture of liquid hydrocarbons, or regarded "gas" as composed

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[159] LOX 789; Tr. 13:1148.
[160] Helex 131.
[161] Tr. 13:1181.

solely of hydrocarbons. It would be the sheerest fiction, in our view, to apply the rule of *ejusdem generis* to determine that the average lessor intended *not* to convey helium, when other evidence establishes that he had no intention whatever respecting it.

This question of intention, however, leads to the landowners' fourth argument, which may fairly be summarized as follows. The value of natural gas lies primarily in its suitability for use as a combustible fuel; however, helium is valueless as a constituent of the fuel stream, and the average landowner or lessor could not have intended to convey helium as a part of the gas stream.

The end uses of natural gas produced in the Hugoton and Panhandle fields, however, are not limited to fuel alone, and the economic value of natural gas does not lie in its combustible or hydrocarbon properties alone. The principal use of gas has been and is, of course, for fuel. The second most important use of gas is as a feed stock for petrochemical operations.[162] The manufacture of carbon black, by the incomplete combustion of natural gas with oxygen,

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[162] Tr. 72:6850-6851; Tr. 52:5009. [Helex 103 shows the actual and theoretical chemical compounds which are or may be derived from the constituents of natural gas. Hydrocarbon compounds are separated by the process of fractionation, and are put to diverse end uses: e.g., normal butane is used as a propellant in aerosol containers, as a feed stock in the manufacture of synthetic rubber and acetate rayon; both nitrogen and hydrogen are used in the manufacture of ammonia; normal hexane is used as a solvent in food processing. Non-hydrocarbon components of natural gas are also widely used. Phillips, e.g., markets elementary sulphur extracted from hydrogen sulphide, itself combustible though not a hydrocarbon compound. Mercaptans, hydrogen and sulphide compounds, are manufactured from hydrogen sulphide and marketed to stench or odorize natural gas and liquefied petroleum gas. Carbon dioxide is produced and marketed as a separate commodity from natural gas.]

has long been a major use of natural gas. Until 1942, the greater part of the gas produced from the Panhandle field was used in carbon black manufacture and gasoline extraction, and not to serve pipeline consumer and industrial fuel markets. Natural gas is also used as a pressuring agent in oil production, in fireflood, secondary recovery programs, as a purge for pipelines, and as a cushion gas in underground gas storage reservoirs.

Certainly, it was the common understanding among landowners in the area that the marketability of gas underlying one's property depended upon its being at least moderately combustible, sufficient to justify connection of the well to a pipeline, a town or city distribution system. On the other hand, no lessor ever limited the commercial end use of any gas produced under a lease granted by him, and there is no evidence that any lessor ever intended not to sell any and all gas produced thereunder for whatever market existed. In the only instance before a court where the marketability of a gas depended upon its helium content and fitness for helium extraction, the lessor made no claim that helium did not pass under the lease. On the contrary, when the helium plant closed for want of a market for helium, and production from the well was stopped, the lessor claimed abandonment of the lease. (See the factual situation in *Hoff* v. *Girdler,* 104 Colo. 56, 88 P.2d 100 (1939), involving a well serving the Thatcher, Colorado helium plant operated by the Girdler Corporation, referred to earlier herein.)

At least six witnesses who had either taken leases themselves or supervised leasing activities testified that neither

they, nor to their knowledge any other landman or lease negotiator, had ever discussed the gas stream sought to be leased in terms of its constituents. The only lease in evidence making specific provision for helium is a lease to the Shamrock Oil & Gas Corp., dated April 13, 1965,[163] long after the commencement of this litigation, where although the conventional granting language of "oil, gas and all other minerals" was unchanged, a special royalty provision for helium was inserted.

In our view, this argument is but an attempt to convert an uninformed popular notion respecting the commercial uses of natural gas into an intention by the lessor to convey only those discrete constituents of the gas stream, the uses of which conformed to that notion. In *Utilities Production Corp.* v. *Carter Oil Co.*, 72 F.2d 655 (10th Cir. 1934), the Court stated:

> "But the argument that the parties contemplated the use of gas only for such methods of operation and development as were known to the industry the day the leases were signed, is specious. It imputes to the parties an intention to encase themselves, during the terms of the leases, in a strait-jacket. The oil business, then and now, is one in which changes come with lightning-like rapidity. A review of the patent causes in the courts discloses the frequent and radical changes made in the methods of oil operations and development. The argument leads to the conclusion that residue gas could not be used even for drilling if the lessee used any improvement in drills or casing-shoes which was invented after the lease was made. Such a foreshortened intent cannot be imputed to the parties, for they knew that improvements would come about during the terms of the leases, and must have contemplated the use of such improved methods . . ." 72 F.2d at 659.

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[163] Shamrock Ex. 1, No. 103/4530.

We cannot import into a plain grant of "oil and gas" an intention on behalf of either the lessor to convey, or the lessee to receive, only those gaseous constituents of the stream the end uses of which conform to a subjective notion of the commercial end uses of the gas stream at the time of lease execution. This argument is without merit.

Landowners' fifth argument rests upon language found in granting clauses of nearly all the leases herein, which describe the lessee's rights upon the premises. Typically, this language provides that the lease is granted for the "sole and only purpose of mining and operating for oil and gas, and laying pipe lines, and building tanks, power stations and structures thereon to produce, save and take care of said *products* or *substances* . . . ." [Emphasis supplied.] Landowners argue simply that "[r]eference to things leased, including gas, as products or substances seems wholly incompatible with reference to a state of matter. [Landowners' Post-Trial Reply Brief, p. 19.] This reference is irrelevant, in our view, to construction or interpretation of the word "gas."

No case cited by landowners supports any of their arguments that gas conveyed by oil and gas leases is limited to gaseous hydrocarbons only.

Landowners rely in part upon a group of cases known as the Oklahoma "casinghead gas" cases. In *Hammett Oil Co.* v. *Gypsy Oil Co.*, 95 Okla. 235, 218 Pac. 501 (1921), plaintiff owned two-thirds of a 40 per cent interest in oil production which had been retained by an original lessee who had sub-leased part interest to defendant. Defendant contracted with the original lessors to manufacture gasoline

from casinghead gas produced from oil wells. Plaintiff asserted that gasoline manufactured from casinghead gas from an oil well was oil, and entitled to royalty thereon. The court stated the familiar standard of interpretation:

> "In our judgment the question is not whether gasoline manufactured from casinghead gas is oil in a technical sense, but whether it is oil in its ordinary and popular sense, and was so understood by the parties to the oil and gas lease. . . ." 218 Pac. 502.

The court found that oil, in its ordinary and popular sense as used in the lease referred to crude oil in its natural state as it was produced from the mouth of the well.[164] The court held that casinghead gas did not constitute oil upon which a royalty was payable.

A different result was reached in *Twin Hills Gasoline Co.* v. *Bradford Oil Corp.*, 264 F. 440 (E.D. Okla. 1919), wherein the lease provided separately for royalty on oil and a yearly payment of $200 on each gas-producing well. It provided further that the lessee would have the right to use casinghead gas from the wells of the lease for their operation. It appears that plaintiff sought $200 for each well from which casinghead gas was produced and sold, notwithstanding an oil royalty was being paid on production therefrom. The court held that casinghead gas was oil, reasoning thus:

> "In determining what the intent of the parties was, we look to the surroundings, the location, and the conditions of the oil business at that time. The evidence discloses that casing head gas is a component part of oil, that casing head gas is not made from dry gas, and that it is not a product of

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[164] By necessary implication it does not mean a chemically pure mixture of liquid hydrocarbons.

dry gas, but that it is a product of wet gas, and that wet gas exists only with oil. Therefore, casing head gas is a component of oil." 264 F. at 441.

In *George* v. *Curtain,* 108 Okla. 281, 236 Pac. 876 (1925), the court held specifically that casinghead gas was neither oil nor gas under an oil and gas lease which provided a royalty on oil from an oil well, and on gas from a gas well, but not for gas produced from an oil well:

"[W]here the lease contract . . . was made prior to the time when casing-head gasoline was known to be of commercial value, and no mention made of the casing-head gas to be taken from oil wells, we are forced to the conclusion that that subject was not within the contemplation of the parties when the lease contract was entered into, and is therefore not covered or controlled by said lease contract." 226 Pac. at 877.

The basis for this rule is staed in *Broswood Oil Co.* v. *Sand Springs Home,* 178 Okla. 550, 62 P.2d 1004 (1936):

"Common usage of the terms 'oil' and 'natural gas' is the basic principle upon which the foregoing holding is based. A lease executed for the sole and only purpose of mining for oil and gas, reserving to the lessor a royalty on oil and on gas, means oil in its ordinary acceptation and *gas from a gas well as the same is ordinarily understood* . . . and in the absence of a contrary intention of the parties the courts will so construe the lease contract. Sections 9467, 9468, O.S. 1931." 62 P.2d at 1006 [Emphasis supplied.]

In *Navajo Tribe of Indians* v. *United States,* supra, the court suggested that the "Oklahoma courts were motivated by a desire to insure adequate compensation for the lessors." 364 F.2d at 326. It may equally be argued, however, that the Oklahoma courts regarded the provisions for royalty to indicate the common and ordinary meaning attributed to oil and gas by the parties, and that gas produced from an oil

well did not fall within that manifest contemplation. In Oklahoma, the rules of construction are statutory.[165]

In *Lone Star Gas Co.* v. *Stine,* 41 S.W.2d 48 (Tex. Com. App.) (1931), 82 A.L.R. 1299, plaintiffs had executed certain gas deeds conveying to the defendant gas company all their "rights, title and interest . . . present and prospective, in all natural gas" in the described property, reserving to themselves all oil rights. The defendant later constructed an absorption plant to extract gasoline carried in the gas in the form of vapor. Plaintiff claimed that gasoline thus extracted was oil, not "natural gas," and therefore an one-eighth royalty was due. The right to helium was not an issue. The court stated:

"The gas company paid a large consideration running into thousands of dollars for 'all natural gas' in and under these lands. An examination of the several instruments clearly

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[165] Okl. St. Ann.:

¶ 152. A contract must be so interpreted as to give effect to the mutual intention of the parties, as it existed at the time of contracting, so far as the same is ascertainable and lawful.

¶ 154. The language of a contract is to govern its interpretation, if the language is clear and explicit, and does not involve an absurdity.

¶ 160. The words of a contract are to be understood in their ordinary and popular sense, rather than according to their strict legal meaning, unless used by the parties in a technical sense, or unless a special meaning is given to them by usage, in which case the latter must be followed.

¶ 161. Technical words are to be interpreted as usually understood by persons in the profession or business to which they relate, unless clearly used in a different sense.

¶ 163. A contract may be explained by reference to the circumstances under which it was made, and the matter to which it relates.

¶ 164. However broad may be the terms of a contract, it extends only to those things concerning which it appears that the parties intended to contract.

¶ 170. In cases of uncertainty not removed by the preceding rules, the language of a contract should be interpreted most strongly against the party who caused the uncertainty to exist. The promisor is presumed to be such party . . . .

discloses that the gas conveyed was not limited to any particular kind or character of gas, but the conveyance is all-embracing as regards gas, and covers and includes 'all natural gas.' The term 'all natural gas' would include all the substances that come from the well as gas, and that regardless of whether such gas be wet or dry. *It is undisputed in the evidence that the term 'natural gas' includes numerous elements or component parts, but the very language of the conveyance is such as to include therein all these component parts which were in gaseous form when they came from the wells.*

* * *

This gasoline was separated from the gas and became liquid only when it was subjected to the manufacturing process shown above. It is true that the gasoline element was in the gas when it came from the well, but it was then in gaseous form, that is, it was an element or component part of the natural gas, and gas or natural gas was the thing conveyed by the deeds. The legal effect of the deed was to convey 'all natural gas' and *by the term 'natural gas' is meant all the constituent elements composing the same.*" 82 A.L.R. at 1302-1303. [Emphasis supplied.][166]

Where language of a contract is doubtful or uncertain, a practical construction which the parties placed upon the contract over a long period of performance may be examined to arrive at the parties' intent and purpose. *Moore* v. *Jones,* 215 F.2d 719, 721 (10th Cir. 1954). All the landowners have done is to execute leases drawn by the lessee, and receive the fractional royalty by lessee on all gas produced, without qualifying or limiting the gas upon which such royalty is payable. Royalty clauses typically

[166] An operating agreement between the parties provided that plaintiff, having reserved the oil, could purchase any well producing oil only, and the gas grantee could purchase all gas wells. The court held the terms "gas" and "natural gas" to be synonymous.

require payment of a fractional royalty, usually one-eighth, of the proceeds of the gas sold at the well, or if marketed off the lease premises, one-eighth of the market value of the gas at the wellhead. The nearly universal practice is to measure the volume of gas produced from the well by an orifice meter placed at or near the wellhead, which meter measures the entire volume of gas passed through the meter. The royalty is the product of a price stated per Mcf of gas multiplied by the number of Mcf passing through the meter. So, the pertinent conduct of the landowners is to have received payment for many years of a royalty based and computed on the total volume of gas produced, without objecting that the lessee was not entitled to all of the volume for which he tendered payment.

Likewise, lessee-producers have dealt with the total stream produced from the well, without regard to its separate constituents. They have produced it as a single stream, measured it thus and computed royalty payments on a volumetric basis.

Moreover, lessee's right to drill, produce and market gas under a lease is exclusive. A lessee "has the exclusive right to produce oil and gas from the premises for the time named in the lease . . . ." *Shaffer* v. *Kansas Farmers Union Royalty Co.*, 146 Kan. 84 at 89, 69 P.2d 4 (1937). It is a grant of the "exclusive right . . . to take all the oil and gas that could be found by drilling wells upon the particular tract." *Rich* v. *Donaghey*, 71 Okla. 204, 177 P. 86, 89 (1918), and see *In re Levy*, 185 Okla. 477, 94 P.2d 537, 538 (1939). In Texas, an oil and gas lease grants the lessee exclusive rights to all oil and gas therein. See *Howell*

v. *Comm'r of Internal Revenue,* 140 F.2d 765 (5th Cir. 1944), *certiorari den.,* 322 U.S. 735, 88 L.Ed. 1569, 64 S.Ct. 1048.

The conduct of the parties bears upon another issue, however, insofar as it may be relied upon by any adverse claimant to the funds in issue as a basis for estoppel against the landowners who seek to press their own claims.

In 28 Am. Jur. 2d, *Estoppel and Waiver,* § 27, the writer offers the following encyclopedic definition of estoppel:

"The most comprehensive definition of equitable estoppel or estoppel in pais is that it is the principle by which a party who knows or should know the truth is absolutely precluded, both at law and in equity, from denying, or asserting the contrary of, any material fact which, by his words or conduct, affirmative or negative, intentionally or through culpable negligence, he has induced another, who was excusably ignorant of the true facts and who had a right to rely upon such words or conduct, to believe and act upon them thereby, as a consequence reasonably to be anticipated, changing his position in such a way that he would suffer injury if such denial or contrary assertion was allowed."

In *Gas Service Co.* v. *Consolidated Gas Utilities Corp.,* 145 Kan. 423, 65 P.2d 584 (1937), the court approved the words of another encyclopedist:

"The rule as to what should constitute equitable estoppel is very well stated in 10 R.C.L., page 689. There it is said:

" 'So, while the attempted definitions of such an estoppel are numerous, few of them can be considered satisfactory, for the reason that an equitable estoppel rests largely on the facts and circumstances of the particular case and consequently any attempted definition usually amounts to no more than a declaration of an estoppel under those facts and circumstances. . . . The following, however, may be

> ventured as the sum of all cases: That a person is held to a representation made or a position assumed, where otherwise inequitable consequences would result to another who, having the right to do so under all of the circumstances of the case, has, in good faith, relied thereon. Such an estoppel is founded on morality and justice.' " 145 Kan. at 435-436.

Landowners are not estopped to claim the fund as against the adverse stakeholders, for, to paraphrase *Gas Service Co., supra,* "there can be no claim that the conduct of [plaintiffs] was influenced by any conduct or concealment or positive action on the part of . . . [defendant landowners]." 145 Kan. at 436. For the identical reason, the landowners here are not estopped in their claims to the fund as against their fellow claimants, the lessee-producers, for no conduct of the landowners has in any way prejudiced or otherwise affected the claims of the latter to the fund.

In view of the circumstances existing at the time of the lease executions, the definition and usage of terms within the industry, and by the intention of the parties as disclosed by their actions, the court concludes that the grant of gas in each of the leases herein extends to the entire gas stream which emerges at the wellhead absent an express reservation of any constituent products, and that helium passes thereunder unless expressly reserved.

GAS PURCHASE CONTRACTS

The next question is whether title to helium passed not only from the landowners to the lessee-producers but from the lessee-producers to their pipeline company purchasers. This question rests upon the gas purchase contracts under which the lessee-producers sell and deliver natural gas to the pipeline purchasers.

Insofar as pertinent herein, the typical contract contains a recital clause, a definition of gas, a dedication or commitment of described acreage, reservations therefrom and processing rights, if any, statements of the quantities to be produced and delivered, pricing provisions, Btu rejection and/or price adjustment clauses, quality standards, provisions for standards and methods of measurement, billing and payment procedures, and warranties of title.

Recital clauses, when they occur, frequently express with varying brevity or elaborateness the interest of the buyer, as owner of a natural gas pipeline system, in acquiring additional supplies of gas therefor.[167]

Definitions of gas are expressly comprehensive, and refer typically, for example, to "all gas produced from gas wells including all gases indigenous to the reservoir . . .;" or "the entire stream flowing from a well including all compounds, elements, and mixtures indigenous to the reservoir . . .;" or "raw natural gas indigenous to the reservoir" or "raw natural gas, without removal of any of its constit-

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[167] See, e.g., contract dated March 12, 1948, between United Producing Co. and Cities Service Gas Co.:

"Cities is engaged in the business, among other things, of producing and purchasing natural gas and selling same as wholesale to distributors of natural gas in numerous towns and communities in a wide area comprising several states of different climatic and temperature characteristics. In order to meet the requirements of its said customers, it is desirous of obtaining, from time to time, supplies of merchantable natural gas, in addition to its present supply, that will be ample to meet, insofar as is possible, at all times and over a long period of years, the demands of its customers at the various times such demands occur in its widely distributed markets."

Ashland FPC Rate Schedule 111, Ashland Ex. 5; Tr. 37:3740.

uents."[168] Gas and natural gas are used interchangeably throughout these contracts with the same meaning.

Dedication or commitment clauses describe the acreage or wells from which gas is committed to performance of the contract. Every commitment clause contained in a Panhandle contract with a named lessee-producer specifically dedicates all gas which is produced, or which can be commercially produced, or in which seller has an interest.[169] Leases under which production is committed are generally identified in the contracts by legal description of the acreage, name of lessors, dates of leases, and the name and percentage interest of the seller. These dedication or commitment clauses made no distinction as to the composition of gas from the committed acreage.

From gas from the committed acreage, there may be reserved to the seller oil, casinghead gas, gas used in lease operations, liquid hydrocarbons, oil or condensate removed by separators, and liquefiable hydrocarbons, all removed according to specific processing rights elsewhere in the contract. It is the practice in the industry that no seller of gas retains rights to process the stream for removal of any of its constituent parts, such as gasoline, or liquid or liquefiable hydrocarbons unless the right is specifically reserved to him in the contract. Six Panhandle contracts, all executed since 1963, reserve to the seller the right to process the gas stream for the extraction of helium, but that if he fails to do so, or to commence extraction within

[168] Helex Ex. 85, part 1.
[169] Helex Ex. 84.

a given period of time, its rights under that reservation terminate.[170]

Statements of quantity to be produced are typically stated in terms of volume. Production from pro-rated wells, of course, is determined by the production allowances assigned by state regulatory bodies. For non-prorated wells, annual production is frequently stated by the contract to be at an annual rate which will cause depletion of the well within a period of years, commonly twenty; non-prorated production may also be stated to be in volumes ratable with all other wells connected to the buyer's system producing from a common source of supply.[171]

The price is universally stated in cents per thousand cubic feet (Mcf), and the unit of measurement is typically stated as "1000 cubic feet (Mcf) of gas at a temperature of sixty degrees (60°) Fahrenheit and an absolute pressure of fourteen and sixty-five hundredths pounds per square inch (14.65 psia)."[172]

Nearly all contracts held by interpleading plaintiff pipeline companies with named lessee-producers contain what are referred to herein as "Btu clauses."[173] Btu is the abbreviation for British Thermal Unit, the amount of heat required to raise one pound of water one degree Fahrenheit at 39.2° Fahrenheit. Btu clauses are of three basic kinds. Nearly all contracts contain Btu rejection clauses, which permit the seller to refuse gas which yields less than a

[170] Helex Exs. 84, 85.
[171] Helex Ex. 84.
[172] Ibid.
[173] LPX 220.

specified number of Btu's per cubic foot of gas.[174] The second type, the downward Btu price adjustment clause, or penalty clause, permits the seller to reduce the price payable in proportion that the Btu yield falls below a specific level per Mcf. Rejection and penalty clauses are typically combined, with the penalty invoked at a level somewhat higher than the rejection level. Penalty clauses may require the price reduction to be computed by either a proportionate, calculated reduction in the volumes upon which the contract price is payable[175] or by proportionate reduction in the price itself.[176] A limited number of con-

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[174] "4.2. Minimum. The gas delivered hereunder shall have a heating value of not less than 1,000 BTU per cubic foot. If the heating value of any gas tendered hereunder shall be below 1,000 BTU per cubic foot, Buyer may, at its option, refuse to accept delivery of such gas, in which event the producing horizon from which the substandard gas is being produced . . . shall be released from the terms and conditions of this Agreement." Gas purchase agreement between Pan American Petroleum Corp. and Panhandle Eastern Pipe Line Co., March 5, 1958, Gulf FPC Rate Schedule 167, Gulf Ex. 18.

[175] "If in any month, the average total *heating value,* when saturated with water vapor, of the gas delivered hereunder shall have been less than 1,000 B.T.U. per cubic foot of gas, then the volume of gas measured hereunder during each month shall be reduced by multiplying the volume delivered by the quotient obtained by dividing the average heating value of the gas delivered in B.T.U. per cubic foot by 1,000." Gas purchase contract between United Producing Company, Inc., and Argus Natural Gas Company, August 25, 1943, Ashland FPC Rate Schedule 116, Ashland Exh. 7.

[176] "(b) *Adjustment for Deficiency.* If the weighted average gross heating value of all gas delivered hereunder during any month shall be less than 950 Btu per cubic foot when saturated with water vapor, then the applicable price . . . which would otherwise be payable for all gas delivered hereunder during such month shall be reduced by multiplying said price by the quotient obtained by dividing the weighted average gross heating value of the gas so delivered, expressed in Btu per cubic foot when saturated with water vapor, by 950; provided, however, such adjusted price shall never be less than 9.8262 cents per one thousand cubic feet (MCF)." Contract between United Producing Co. and Northern, now Ashland FPC Rate Schedule No. 122, Ashland Ex 10.

tracts contain *upward* Btu price adjustment clauses, whereby the price is proportionately increased for gas containing over a given number of Btu's.[177]

Btu clauses are commonly placed in the "Quality" sections of the contracts, which also typically state maximum levels for so-called impurities, such as hydrogen sulphide, sulfur, carbon dioxide, uncombined oxygen, and require that the gas delivered be merchantable, or as produced in its natural state, and that it be practically free of foreign materials and objectionable substances, such as water, crude oil, dust and the like.

Billing is generally provided to be by monthly statements showing the amount in volumes of gas delivered during the preceding month.

We find no contract in which the seller does not warrant title to the gas delivered to the buyer. Such warranties typically extend to all *gas* delivered.

Since 1960, a few Panhandle gas purchase contracts provide expressly for the reservation of helium to the seller

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[177] See contract executed April 6, 1960, between United Producing Co. and Panhandle Eastern, now Ashland FPC Rate Schedule No. 142, Ashland Ex. 14:

"(c) *Adjustment of Price*: If the heating value of the gas delivered to Buyer at any delivery point shall be less than 1,000 Btu per cubic foot, then the price payable for such gas delivered at such delivery point shall be proportionately reduced, and, if the heating value of such gas is greater than 1,000 Btu per cubic foot, then the price for such gas shall be proportionately increased. To determine such increased or reduced price, the applicable price . . . shall be multiplied by a factor, the denominator of which shall be 1,000 and the numerator of which shall be the heating value of the gas delivered at such delivery point; provided, however, notwithstanding anything herein to the contrary, the factor used in determining such increased price shall not in any event exceed 1.2 even though the heating value of the gas is found to be in excess of 1,200 Btu per cubic foot."

in accordance with specified processing rights. One form of reservation permits the producer to remove helium prior to delivery to seller at points at or near the wellhead; as to all helium not so removed, the seller warrants title.[178] Another provision permits the seller to elect within the first two contract years to extract liquefiable hydrocarbons and/or helium, and requires commencement of extraction within three years. Failing this, such rights terminate.[179] A third variation provides that upon failure to commence extraction within three years, seller expressly releases all claims to helium contained in gas delivered under the contract.[180]

Lessee-producers' contentions are basically threefold: that natural gas, or gas, as used in those contracts, is used with a trade or industry meaning to describe gaseous hydrocarbons alone; that by operation of Btu price adjustment clauses payment under those contracts is geared to the hydrocarbon content alone, and helium, although delivered in the gas stream, is not paid for; and lastly, that construction of the contracts to cover helium would be repugnant to both Section 11 of the 1960 Helium Act Amendments, and the Natural Gas Act.

We turn first to the alleged industry meaning of the terms "gas" and "natural gas" to define "a mixture of gaseous hydrocarbons, formed in nature and found in the earth." A number of witnesses with long experience in the

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178 See, e.g., Ashland Exh. 17, p. 17.
179 Ashland Exh. 14, p. 29.
180 E.G., Cities Service Oil Exh. 6, FPC Rate Schedule 138, p. 24 of contract dated March 24, 1960.

industry testified to such a usage.[181] A number of definitions of gas and natural gas from mining, petroleum engineering, and geology glossaries and dictionaries, the publication dates of which span the period from 1914 to 1965, were introduced into evidence.[182] In the earliest publication, a United States Geological Survey glossary published in 1914, natural gas is defined as a "mixture of gaseous hydrocarbons found in nature; in many places connected with deposits of petroleum, to which the gaseous compounds are closely related,"[183] a definition which appears frequently thereafter. A petroleum refining glossary published in 1953 by the American Petroleum Institute defines natural gas as "[g]aseous forms of petroleum, commonly called 'natural gas,' [which] consist of mixtures of hydrocarbon gases and vapors, the more important of which are methane, ethane, propane, butane, pentane, and hexane, all of the paraffin series . . . ."[184]

Another of the dictionaries offered by lessee-producers was cited in *Deep South Oil Co. of Texas* v. *F.P.C.*, 247 F.2d 882, (5 Cir., 1957); Cert. Den., *Humble Oil & Refining Co.* v. *F.P.C.*, 355 U.S. 930, 2 L.Ed.2d 413, 78 S.Ct. 410.

> "Petitioner also insists that the casinghead gas which it sells is not 'natural gas' within the meaning of the Act. For answer we deem it sufficient to say that there is nothing in the general language used in the definition of 'natural gas,' quoted above, which suggest that a special or narrow or un-

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181 Tr. 37:3731, 3737; 43:4275-4290; 44:4297-4299.
182 LPX 241, 242.
183 Ibid.
184 Ibid.

natural definition was meant. Boone's Petroleum Dictionary (1952) defines natural gas as *a mixture of gaseous hydrocarbons found in nature.*" 247 F.2d at 888.

The Boone definition is identical with the 1914 U.S.G.S. definition. The Natural Gas Act, 15 U.S.C. § 717 et seq., is of little assistance. It defines natural gas simply as "either natural gas unmixed, or any mixture of natural and artificial gas." 15 U.S.C. § 717(a).

The helex parties counter with their own definition of "Natural gas of commerce . . . [as] a hydrocarbon mixture generally containing other gaseous substances, some of which are inflammable, some non-inflammable, and others corrosive in their natural and combustion states."[185] The helex group likewise responded with witnesses also of long familiarity with the petroleum producing and transporting industry, who had never heard of the lessee-producers' alleged industry usage.[186]

In dealing with similar claims regarding the leases, we found that no such usage existed. For the same reasons, we must reiterate that finding here. The term "natural

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[185] Helex Ex. 275. See also a joint publication of the American Gas Assoc., American Petroleum Institute and the Canadian Petroleum Association concerning reserves of natural gas in the United States and Canada, dated December, 1966, which states as follows:

"For the purpose of the committee report, natural gas is defined to be a mixture of hydrocarbon compounds and small quantities of various non-hydrocarbons existing in gaseous phase or in solution with oil in natural underground reservoirs at original reservoir conditions. The principal hydrocarbons usually contained in the mixture are methane, ethane, propane, butanes and pentanes and typical non-hydrocarbon gases which may be contained in reservoir natural gas are carbon dioxide, hydrogen sulphide, nitrogen . . . ." LPX 239.

[186] Tr. 48:4580; 56:5327.

gas" came into existence, it was testified, to distinguish or differentiate fuel gas discovered in underground reservoirs from artificial or manufactured gas, the former having approximately twice the heating value and efficiency of the latter. As we stated before, there is no gas naturally occurring in the entire Hugoton area which consists solely of hydrocarbons, and hence, which would conform to the alleged usage.

The Btu clauses provide the core of the lessee-producers' second argument that only heat-producing hydrocarbons are conveyed under their gas purchase contracts. They characterize these clauses as the "tool . . . developed by the pipeline companies and by the industry as a whole to accommodate the needs and desires of the pipelines for merchantable gas and to pay only for the hydrocarbons which they received from the producers."[187] In sum, it is argued that pipeline companies purchase not natural gas, but energy, that the energy of natural gas derives solely from the gaseous hydrocarbons, and that Btu clauses are the means provided to conform payments to the energy content of the gas delivered.

Pipeline companies respond that they buy and pay for volumes of gas as produced from the well, without regard to its constituents. They point out the limited operation of Btu price adjustments in purchases by each of the plaintiff pipeline companies. For example, of Northern's total 1966 purchases of 195 billion cubic feet of gas, 12 billion, or 6.4%, was subject to Btu penalties for low Btu yield. Of

[187] Tr. 43:4256.

purchases from the Kansas Hugoton, 7.2% was adjusted and in the Guymon Hugoton field, one per cent. Of Cities' total gas purchases in the Hugoton area, Btu penalties were invoked on less than six per cent, and this adjustment, it was testified, was limited to gas purchased from Pan American, which is produced from the so-called "C" acreage in the Kansas Hugoton.[188]

Pipeline companies dispute the argument that inert constituents of the stream are valueless. Indeed, they assert that the inerts are necessary for them to comply with their FPC gas tariffs. The Panhandle tariff provides the following limitation on Btu content:

"2.2 Heating Value. Gas delivered by Seller shall not have a total heating value above one thousand fifty (1050) or below nine hundred fifty (950) British thermal units per cubic foot."[189]

The Cities' tariff provides thus:

"2. QUALITY

The natural gas supplied hereunder shall be of a merchantable quality and shall have a system wide weighted average total heat content of not less than nine hundred thirty-four (934) British Thermal Units per cubic foot saturated with water vapor under the standard measurement next recited. The Company will, however, endeavor to maintain as nearly as possible a system wide weighted average total heat content of nine hundred eighty-three (983) British Thermal Units per cubic foot . . . ."[190]

The Northern tariff provides as follows:

"2.2 Heating Value. The heating value of the natural gas received by Northern from its sources of supply may vary,

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[188] Tr. 52:4959-4960.

[189] LPX 195; Helex 101; second revised sheet No. 34.

[190] LPX 193, Orig. Sheet No. 25.

but it is expected that the gross heating value of the gas delivered will not be less than 975 nor more than 1025 Btu per cubic foot. However, if in any month the arithmetic average of heating values recorded hourly by Northern's calorimeter shall be less than 975 Btu per cubic foot, then the volume of gas delivered during such month shall be computed by multiplying the volume computed as provided [herein] . . . by a fraction whose numerator shall be such arithmetic average heating value and whose denominator shall be 975.X"[191]

The upper limit is partially, at least, a safety precaution. Delivery of a richer gas than the burner is set for may result in incomplete combustion, smoke, soot, and toxic gases. Any gas in the Hugoton area would yield over 1,050 Btu's (per cubic foot) if all inerts were removed.[192] Thus, the inert constituents of the stream, including helium, are necessary to enable it to comply with its tariffs and to market natural gas thereunder.

Further, the pipelines point out that so long as gas is above the tariff Btu minimum, they realize greater gross revenue from delivery of a lower rather than a higher Btu gas, for the buyer must then purchase a greater volume of gas to obtain the same heat yield. They further point out that the heating value of a gas stream is not directly a function of the inerts contained therein. Thus, of three samples of gas each containing 17.5% inerts by volume, Btu content ranged from 942 to 1005.[193]

Pipelines further point out that both the producing and

[191] LPX 191, Orig. Sheet No. 128.
[192] Tr. 41:4088.
[193] Helex Ex. 279.

transportation industries have dealt with gas in its gross volumetric dimensions in numerous ways. Thus, measurement of gas at the point of delivery to pipeline purchasers, whether at the wellhead or elsewhere; reporting of open flow potentials (the gas well can produce against atmospheric pressure); the setting of allowable production amounts by state regulatory bodies; computation of industry taxes, such as gross production, conservation and sanitation; measurement of tailgate deliveries at processing plants; estimation of reserves; and measurement of pipeline deliveries to distributing companies - - - all are done on a volumetric basis.

Lessee-producers find support for their appraisal of the importance of Btu clauses in two proceedings before the Federal Power Commission. In the first, the Commission dealt with the necessity and propriety of *upward* Btu adjustment clauses. Although penalty clauses appear in gas purchase contracts commencing around 1943, and were approved by the FPC when it assumed jurisdiction over independent producers in 1954, it had not approved upward Btu clauses, which provide premium prices for high Btu gas. In this proceeding, the Commission specifically approved upward adjustment clauses, notwithstanding the fact that their operation would increase the cost of such higher Btu gas above the guideline levels which had theretofore been established. The decision to approve such clauses was grounded not upon any effort to correlate prices to energy content as the subject of the sale, but to provide an economic incentive to producers with high Btu gas to introduce such gas into the pipeline market, without first removing the

higher hydrocarbons therefrom.[194] The Commission stated thus:

> "It is no coincidence that, while downward Btu provisions, usually from a 1,000 Btu base, are found generally in all producing areas, the upwards Btu clause has been limited almost entirely to the five pricing areas involved in the instant certificate proceedings. In these or nearby areas considerable amounts of low Btu gas, ranging as low as 830 Btu per cubic foot, have been discovered and made available for the interstate market. It is essential, if this gas is to be brought up to marketable standards, that it be mixed with higher Btu gas — gas which also is present in considerable quantities in the areas, with Btu ranges of up to approximately 1,200 Btu's. It is clear, however, that unless the pipeline is in a position to offer a reasonable premium for the higher Btu gas, the producers will have a strong economic interest to extract the high Btu hydrocarbons from their gas before delivery to the pipeline. . . . Under these circumstances, an appropriate upward Btu adjustment provides the necessary inducement for producers making it possible for the pipelines to acquire the supply of high Btu gas required for blending without which a large supply of low Btu gas could not be brought into the interstate pipeline system. Accordingly, we hold that the upward clauses here in issue are reasonably required by the public convenience and necessity for these areas."

The second proceeding was the Permian Basin area rate proceeding, recently affirmed in toto in *Permian Basin Area Rate Cases,* ..... U.S. ....., 20 L.Ed.2d 312, 88 S.Ct. ..... (1968). In its opinion[195] the Commission approved price adjustments based on Btu content, fixing an upward Btu adjustment from a base of 1,050 Btu's, and a downward adjustment, or penalty, from 1,000 Btu's. Thus,

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[194] See Opinion No. 464, *Texaco, Inc., et al.,* Dkt. No. G-8087 (LPX 218).
[195] Excerpted in LPX 219.

gas with a Btu content of less than 1,000 Btu per cubic foot must be sold at a price proportionately lower than the applicable area maximum, and gas with a Btu content of more than 1,050 Btu per cubic foot may be sold at a price proportionately higher than the area maximum. Within the 50 Btu range, no adjustment is made. The following language from the Commission's opinion is pertinent:

"The importance of quality standards as an integral part of our ceiling price becomes readily apparent if it is recognized that gas is purchased for its energy. The price of gas cannot be related to volume alone but must be related to units of energy free of impurities and sufficiently compressed to enter the pipeline if it is to serve as a mechanism to assure just and reasonable rates."[196]

"Looking to the future, however, we believe that it is important that we implement the general principle that Btu adjustment provisions 'are in the public interest' advanced in our recent decision in Texaco, Inc., Opinion No. 464 (decided June 10, 1965). While Btu adjustments have not played a major role in the Permian Basin in the past we believe it important that our price for new gaswell gas reflect the energy content of the gas, which in reality is what the consumer is purchasing." [197]

Natural gas is sometimes sold on an energy basis, that is, at a given price per 100,000 Btu's (a therm), and not per Mcf. When gas is purchased on this basis, the contract says so. Such sales are not common. Northern has two contracts in the State of Kansas for direct sales of gas (not for resale) on the therm basis. Northern sells gas under two additional contracts containing Btu adjustment clauses above and below 1,000 Btu. These sales comprise only two percent of Northern's total sales. All other sales

[196] LPX 219, p. 95.
[197] LPX 219, p. 99.

are made on a volumetric basis subject to the tariff Btu minimum of 975.

Cities likewise has two contracts, both with one customer, in which gas is sold at a given price per million Btu's. A number of early gas sales contracts between Panhandle and various companies, frequently distributing companies, provided for the sale of gas in both volumes and Btu equivalents.[198] Panhandle's original tariff filed with the FPC provided that the unit of gas delivered thereunder would be the therm.[199] The current tariff provides that the "sales unit of the gas deliverable by Seller to Buyer shall be one thousand cubic feet (MCF) . . . ."[200] Thermal content is now but a specification of quality.

Sales, however, are still made on a therm basis by some companies.[201]

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[198] See, e.g., a contract dated August 31, 1935, between Panhandle and Detroit City Gas Company, at page 3:

"* * * seller agrees to sell and deliver to buyer, and buyer agrees to buy from seller, all of the natural gas requirements of buyer for the distribution and sale to any and all of its present and future customers and for its own use but not in excess of 90 million cubic feet, or its equivalent 912,000 therms per day, which represents all of the gas seller now believes it can safely contract to furnish buyer at this time." Helex 99, part 3.

[199] Helex 100, part 2.

[200] LPX 195, Orig. Sheet No. 33.

[201] One witness testified before the FPC in the Texaco, Inc., proceedings concerning Btu price adjustment clauses, as to the prevalence of the practice:

"Question: Have you found tariffs which are not on a volumetric basis?

"Answer: Yes. In the past, many of the pipeline companies sold the gas at the city gate on a therm basis but most of the companies have now changed to an M.c.f. sales basis with specific heating value specifications.

"Natural Gas Pipe Line Company currently delivers gas on a therm basis to its distributing company customers. Moreover, a number of distributors sell to their customers on a therm basis or M.c.f. with b.t.u. adjustment basis." [Tr. 49:4722].

When gas is sold on a therm basis, the argument is plausible that the buyer purchases only energy. In the purchase of natural gas for resale in interstate commerce, under contracts such as those before us, we cannot but conclude, however, that pipelines purchase not energy, but fuel, which is measured and purchased on a volumetric basis. We cannot so override the plain language of contracts providing for the purchase of *gas* so as to find that the parties were dealing in energy, or British thermal units, alone.

Thirdly, lessee-producers argue that even if the gas purchase contracts be construed to convey the entire stream, the price paid thereunder cannot, as a matter of law, have included payment for helium. The parties have stipulated that helium-bearing natural gas delivered to Cities Service Gas, Northern Natural Gas, and Panhandle from which helium is subsequently extracted is gas purchased for resale in interstate commerce, that all natural gas purchase contracts and amendments thereto between lessee-producers and Cities Service Gas, Northern Natural Gas, and Panhandle are filed with the Federal Power Commission as part of FPC Rate Schedules under the Natural Gas Act, as amended, 15 U.S.C. §§ 717, et seq., and that all payments made by these three pipeline companies to lessee-producers are at rates established or permitted to be paid by the Federal Power Commission.[202]

Since June 7, 1954, these sales by lessee-producers to pipelines have been regulated by the Federal Power Com-

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[202] Pre-Trial Order, p. 12, ¶ ¶ C, D, E.

mission under the Natural Gas Act, under *Phillips Petroleum Co.* v. *Wisconsin,* 347 U.S. 672, 98 L.Ed. 1035, 74 S.Ct. 794 (1954), wherein the Court held that the Commission's jurisdiction extended "over the rates of all wholesales of natural gas in interstate commerce, whether by a pipeline company or not and whether occurring before, during, or after transmission by an interstate pipeline company." 347 U.S. at 682, 98 L.Ed. at 1047-48. Later that year, following that decision, the Commission ordered that all independent producers so engaged on or since June 7, 1954, file with the Commission rate schedules consisting of the "basic contract and all supplements or agreements amendatory thereof . . . showing the service to be provided and the rates and charges . . . applicable to the transportation of natural gas in interstate commerce or the sale of natural gas in interstate commerce for resale subject to the jurisdiction of the Commission."[203] An independent producer is defined as "any person as defined in the Natural Gas Act who is engaged in the production or gathering of natural gas and who sells natural gas in interstate commerce for resale, but who is not engaged in the transportation of natural gas (other than gathering) by pipeline in interstate commerce."[204]

No sale may be made by a producer of natural gas in interstate commerce for resale unless there is on file with the Commission a certificate of public convenience and necessity authorizing the sale, and a rate schedule covering

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[203] 18 CFR § 154.93.

[204] 18 CFR § 154.91(a)

that sale, and no payment may be received except at the effective rate on file.

From 1954 through 1960, the Commission attempted rate regulation of independent producers on the basis of conventional company-by-company, sale-by-sale, utility regulation.[205] In 1960, the Commission abandoned this method, and undertook rate regulation on a geographical area basis, dividing the country into 23 pricing areas, and assigning to each preliminary prices called "guideline prices," pending final determination of just and reasonable rates for each of these areas. The prices thus set constituted maximum prices for each area.

These guidelines were applied to rates in the following manner. If a rate increase was filed by the parties to a gas purchase contract which did not increase the rate above the area guideline, the new rate would be approved automatically. If the new filed rate was higher than the guideline, the increase would be suspended and an investigation commenced. Thus, the contract price in some instances may exceed the FPC-approved service rate, where the contract price exceeds the guideline prices and has been suspended pending investigation.

The Commission is also charged with rate regulation of pipeline companies, which is based on conventional public utility regulation, the basic principle being "to prescribe rates which will give the company the opportunity to generate revenues sufficient, after meeting all reasonable op-

[205] Tr. 73:6937.

erating expenses, depreciation and taxes, to yield to the company profits . . . roughly comparable to those of companies engaged in comparable risks."[206] The sum of these expenses, depreciation, taxes, and return on investment, constitute a company's cost of service, after recovery of which the company earns a profit. A pipeline may engage in what are described as non-jurisdictional activities, such as the extraction of hydrocarbons, which the Commission is not empowered to regulate. Thus, the sales of the products of such extraction are not subject to Commission rate regulation. However, the earnings realized from such non-jurisdictional activities are credited to the jurisdictional income of the company, or against its cost of service, in computing the profits realized by the company. Inasmuch as the earnings from the sale of hydrocarbons are proportionately greater than the earnings from the sale of natural gas, the earnings from non-jurisdictional hydrocarbon extraction operate to reduce the rates it will be permitted to charge for jurisdictional sales of natural gas. Stated otherwise, profits from hydrocarbon extraction are credited to the profits realized from natural gas sales, and permit a reduction in gas rates, with the end result that the returns to the pipeline from non-jurisdictional activities are reduced to the average earned on the whole of its system.

In drafting the Helium Act Amendments of 1960, it was thought that absent express provision, revenues from helium activities accruing to any pipeline company or other company subject to the rate-making jurisdiction of the

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[206] Tr. 73:6912-13.

Federal Power Commission would be similarly treated, and it was anticipated that industry participation would be more difficult to promote if participating companies could anticipate only a public utility rate of return on its investment. Accordingly, to provide an economic incentive to industry to undertake helium conservation, the Department of the Interior proposed to exempt helium extraction operations from the provisions of the Natural Gas Act and the jurisdiction of the Federal Power Commission.

Section 11 of the 1960 Amendments provided accordingly:

> "The provisions of the Natural Gas Act of June 21, 1938, as amended, shall not be applicable to the sale, extraction, processing, transportation, or storage of helium either prior to or subsequent to the separation of such helium from the natural gas with which it is commingled, whether or not the provisions of such Act apply to such natural gas, and in determining the rates of a natural gas company under sections 717c and 717d of Title 15, whenever helium is extracted from helium-bearing natural gas, there shall be excluded (1) all income received from the sale of helium; (2) all direct costs incurred in the extraction, processing, compression, transportation or storage of helium; and (3) that portion of joint costs of exploration, production, gathering, extraction, processing, compression, transportation or storage divided and allocated to helium on a volumetric basis." 50 U.S.C.A. § 167(i).

During committee hearings on this section, FPC representatives objected that it jeopardized Commission jurisdiction over any stream of natural gas containing helium. It was made clear in both the hearings and floor debate that FPC jurisdiction over natural gas containing helium was to be

unaffected by the amendment.[207]

No party here seriously contends that Section 11 strips the Commission of all its power to determine the rates at which helium bearing natural gas may be sold by lessee-producers to pipeline purchasers, or the rates at which pipeline companies may sell this gas for resale. There has been no change in the methods of Commission regulation of independent producers as a result of the Helium Act Amendments.

The question is whether or not although lessee-producers have contracted for the sale of the entire gas stream, they have received any payment for the helium constituent

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[207] This section was not in the proposals first submitted to Congress in 1958. It appeared first in the redrafted proposals submitted in 1959, in the following form:

"SEC. 9. The provisions of the Natural Gas Act . . . shall not be applicable to the sale, extraction, processing, transportation or storage of helium, either prior to or subsequent to *its separation* from the natural gas with which it is commingled, whether or not the provisions of such Act apply to such natural gas, and, in the determination of rates under Sections 4 and 5 of the Natural Gas Act as amended, the income received from such helium shall not be considered and no exploration, production, gathering, extraction, processing, compression, transportation, storage or other costs which were or would have been incurred in the absence of the extraction of the helium shall be allocated or assigned to the helium." [Italics supplied.]

In response to the FPC fears for its jurisdiction over the entire gas stream notwithstanding helium contained therein, the language italicized was deleted, and the language "the separation of such helium" inserted. During debate on the Senate floor, Senator Carroll stated thus:

"I wish the RECORD to be crystal clear, so that any court which reads this RECORD will know what is the specific legislative intent, namely, that we are not exempting helium-bearing gas from jurisdiction by the Federal Power Commission under the Natural Gas Act. There can be no question about that. For anyone who reads the hearings of the Senate Committee, the report of our committee, my own individual views, which are a part of the Interior Committee reports, and, I hope, the debate this evening."

106 Cong.Rec. 18603 [Helex 281, part 9.]

thereof since 1960. This question is premised on the contention that the Helium Act Amendments of 1960 oust the FPC of rate-making jurisdiction as to all sales of helium, ". . . either prior to or subsequent to the separation of such helium from the natural gas with which it is commingled, ..."[208]

The section was manifestly intended to give any company which is otherwise regulated by the Federal Power Commission complete freedom from Commission regulation in any transaction for the sale, processing, transportation of helium, either commingled with the stream or separate therefrom.

Section 15, 50 U.S.C. §167m, of the Amendments, provides:

> "It is the sense of the Congress that it is in the national interest to foster and encourage individual enterprise in the development and distribution of supplies of helium, and at the same time provide, within economic limits, through the administration of this chapter, a sustained supply of helium which, together with supplies available or expected to become available otherwise, will be sufficient to provide for essential Government activities."

The pipeline companies argue that Section 11, making the Natural Gas Act inapplicable to the "sale, extraction . . . of helium either prior to or subsequent to the separation of *such* helium," applies only to transactions respecting the sale of helium as a separate commodity, and not merely as a component of an entire gas stream. Stated otherwise, it is argued that Section 11 applies only to such helium as is specifically and/or separately the subject of a sale.

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[208] Ibid., Sec. 9 became Sec. 11. See 50 U.S.C. §167.

"The regulatory system created by the [Natural Gas] Act is premised on contractual agreements voluntarily devised by the regulated companies; it contemplates abrogation of these agreements only in circumstances of unequivocal public necessity." *Permian Basin Area Rate Case,* ..... U.S. ....., 20 L.Ed.2d 312, 367, 88 S.Ct. ..... (1968). We have held that lessee-producers contracted to sell, and pipeline companies contracted to purchase, the entire gas stream with all its components, except those expressly reserved.

We think it cannot be disputed that one purpose of Section 11 was to permit parties otherwise subject to FPC regulation to contract for the sale of helium whether commingled with the natural gas stream or not, without FPC regulation. That right is not in issue here, as the pipeline companies point out. The only question is whether the section entitled vendors of helium-bearing natural gas to recover from their purchasers a sum for helium sold under their respective rate schedules above that contractually agreed upon by the parties prior to 1960 as the price of the entire stream.

The argument for lessee-producers is appealing. The Helium Act Amendments created a market for helium which did not theretofore exist. The United States became a major potential purchaser of helium, to supply a newly created demand for helium to meet not only current, but future needs. Prior to 1960, pipeline companies had realized nothing out of helium. For many years it had been a useful, scarce and wasting natural resource. It was not one of economic importance to the pipeline companies, however, who regarded it as a valueless diluent of the heating value

of the stream until a market was created. The passage of the Act created a market for helium, and caused it to become a national resource of major economic importance, solely by virtue of the United States' interest in conserving and purchasing it. Certainly, one effect of Section 11 is to permit contracting parties to recognize its newly acquired economic importance in future contracts for its sale, without regard to FPC regulation of natural gas prices. We do not think that Section 11 was intended to relieve all lessee-producers selling helium-bearing gas from contracts which they might regard as unfair, simply because of a subsequently created market for a constituent of the gas stream which they sell. We must conclude that Section 11 of the Helium Act Amendments does not alter the scope of the gas purchase contracts, does not strip the helium from the gas stream for which the stated price is being paid, and does not *require* that persons contracting for the sale of gas contract separately for the sale of the helium constituent. It merely permits them to do so, and when they have not, the contract must stand as it is written.

F.P.C. PRIMARY JURISDICTON

A question remains with respect to the alleged primary jurisdiction of the Federal Power Commission over the matters involved here. Both Northern and Cities moved to stay proceedings in their respective cases herein, pending determination of certain issues by the F.P.C.[209] Northern proposed that the court refer two issues for Commission determination; that is, whether lessee-producers' rates on

[209] Dkt. Nos. 1209, 1211, KC-1969.

file with the Commission apply to the entire gas stream sold and delivered under lessee-producers' sales contracts, and whether landowners' royalties must be computed only upon those filed rates.

The Cities' issue, already pending before the Commission in designated proceedings, was "whether . . . landowners and producers . . . can lawfully collect more for the gas produced from their well and sold in interstate commerce than that permitted under the defendant producers' F.P.C. Gas Rate Schedules."[210]

The court overruled these motions on the grounds that the issues in the pending F.P.C. proceedings were neither the same nor germane to those herein; that no determination of the issues in those cases would materially assist in the instant cases; and that under Section 11 of the 1960 Helium Act Amendments no issue respecting helium *could* lie within the jurisdiction of the F.P.C.[211]

The court has previously ruled, pp. 30-32, supra, that there is no jurisdiction of landowners' cross-claims for royalty payments from lessee-producers because such claims do not affect their right to participate in the interpleaded fund. Both Cities and Northern have persisted in the view that because helium is in the gas stream, that the Natural Gas Act gives them primary jurisdiction of these proceedings and have relied in part to sustain their position upon *J. M. Huber Corporation v. Denman,* 367 F.2d 104 (5th Cir. 1966). The lower court in that case held that plaintiff

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[210] Dkt. 1211, KC-1969.
[211] Dkt. No. 1225, KC-1969.

lessors were entitled to royalties computed on the basis of actual "market value" of the natural gas, whether or not such value conformed to the rates being collected by the lessee-producer defendant, the Huber Corporation, which rates are regulated by the F.P.C. This ruling was affirmed in *J.M. Huber Corporation v. Denman, supra.* However, the court remanded the case for further proceedings with the following direction:

> "Specifically, the District Court should defer further action including fixing of the actual 'market price' pending invocation by the parties of a ruling by the FPC: (1) (a) as to the jurisdiction of the FPC over payment for royalties for gas sold for resale and transported in interstate commerce, (b) the status of a royalty interest owner's transaction as a sale under the Act where incident to a sale for resale and transportation in interstate commerce, (c) the status of the royalty interest owner's transaction in this case as a sale under the Act. . . ." 367 F.2d at 121. [Footnote omitted.]

Plaintiffs thereupon petitioned the F.P.C. for a declaratory order that the Commission does not have jurisdiction over gas royalties paid them by the Huber Corporation.[212]

Meanwhile, royalty holders commenced lawsuits in Kansas courts seeking, as in *Huber, supra,* recovery of royalties computed not upon the F.P.C.-approved rates collected by their producer, Mobil, but upon the market value of gas produced and sold by it. Mobil thereupon invoked the primary jurisdiction of the Commission, seeking a determination that it *does* have jurisdiction over royalty payments to lessors.[213]

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[212] William Harvey Denman, Trustee v. J. M. Huber Corp., Dkt. No. RI67-113.

[213] Mobil Oil Corp. v. Carl F. Matzen, et al., Docket No. RI67-114.

The Commission consolidated these two proceedings with one other,[214] which raised an identical basic question:

> "[C]an persons contractually entitled to royalty payments for natural gas sold for resale in interstate commerce be classified as 'natural-gas companies' within the meaning of the Natural Gas Act and subject to the jurisdiction of the Commission."[215]

The Commission defined the scope of the hearing to be held thus:

> "The hearing in these cases shall be confined to resolving whether the Commission has jurisdiction over a landowner's royalty interest in natural gas leaseholds and, if answered in the affirmative, how such jurisdiction should be implemented. * * *
>
> "The examiner will consider the questions raised in Docket No. RI67-114 with respect to helium only as the facts on this subject bear upon the royalty interest of landowners in natural gas leaseholds. These will in no way require consideration of any question foreclosed to this Commission's jurisdiction by the Helium Act. (74 Stat. 918) 50 U.S.C. Sec. 1671.
>
> "Contractual issues relating to the specific royalty payments to which any particular lessor is entitled under this lease agreement will not be the subject of this hearing."[216]

So far as appears, helium was mentioned in one of the three consolidated cases, Mobil Oil Corp. v. Matzen, et al. Mobil alleged that as lessee of Matzen, et al., it produced, sold and delivered all gas as entitled under its leases, excepting that it did not sell helium to its gas purchasers. Nowhere did it appear that the lessors relied upon the presence of helium in the natural gas as a factor in establishing market value.

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[214] Western Natural Gas Co. v. Elmer Hennigh, et al., Docket No. RI67-310.
[215] Dkt. No. 1210, Ex. C, p. 2, KC-1969.
[216] *Id.* at p. 3.

In *J. M. Huber* v. *Denman, supra,* the Fifth Circuit referred to the F.P.C. the question of its own jurisdiction over royalty payments. Under Section 11 of the 1960 Helium Act Amendments, even that ground for referral is lacking, for thereunder the Natural Gas Act "shall not be applicable to the sale . . . of helium . . . [even] prior to . . . the separation of such helium from the natural gas with which it is commingled, whether or not the . . . Act [applies] to such natural gas. . . ." Thus, even if the Commission should assume jurisdiction over royalty payments, it would appear that it could not regulate any royalty demanded by a lessor attributable to helium alone.[217]

The doctrine of primary jurisdiction is explained thus in *United States* v. *Western Pac. Railroad Co.*, 352 U.S. 59, 1 L.Ed.2d 126, 77 S.Ct. 161 (1956):

> "The doctrine of primary jurisdiction, like the rule requiring exhaustion of administrative remedies, is concerned with promoting proper relationships between the courts and administrative agencies charged with particular regulatory duties . . . . 'Primary jurisdiction,' . . . applies where a claim is originally cognizable in the courts, and comes into play whenever enforcement of the claim requires the resolution of issues which, under a regulatory scheme, have been placed within the special competence of an administrative body; in such a case the judicial process is suspended pending referral of such issues to the administrative body for its views. . . .
>
> "No fixed formula exists for applying the doctrine. . . . In every case the question is whether the reasons for the existence of the doctrine are present and whether the purposes it serves will be aided by its application in the particular litigation. . . . In the earlier cases emphasis was laid on the desirable uniformity which would obtain if

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[217] See royalty provision in Shamrock Ex. 1, lease 103/4530.

> initially a specialized agency passed on certain types of administrative questions. . . . More recently the expert and specialized knowledge of the agencies involved has been particularly stressed. . . . The two factors are part of the same principle '. . . that in cases raising issues of fact not within the conventional experience of judges or cases requiring the exercise of administrative discretion, agencies created by Congress for regulating the subject matter should not be passed over. . . .' " 352 U.S. at 63, 1 L.Ed.2d at 132.

It is true that the Commission has long regulated the sale of natural gas for resale in interstate commerce, and that such gas does contain helium. However, the questions here have not raised issues of fact "not within the conventional experience of judges," or questions requiring or warrantying the exercise of administrative discretion. The issues of whether title to helium passed under the leases, and whether royalties paid thereunder constitute payment for helium, raise factual and legal questions judicially determinable. Moreover, whether the Commission's jurisdiction extends to royalty payments received by lessors does not affect whether the lessors, or landowners have in fact conveyed the helium contained in that natural gas. If they have, or have not, it is not because of any jurisdiction, or lack of it, in the F.P.C. over royalty payments received by landowners.

UNJUST ENRICHMENT

Lessee-producers and landowners also claim the funds on the ground of unjust enrichment. The argument previously considered constitute the premise by which they seek to enforce this claim.

They point out that when most of the leases and gas purchase contracts were executed, helium was regarded as only an inert diluent of the stream without value in itself, and that landowners, pipeline purchasers and lessee-producers had no reason to anticipate that Congress would suddenly recognize it as a valuable natural resource and create a major new market for it. They argue that they are "economically powerless" to extract it prior to delivery of the gas stream to the pipelines, pointing out that they can not, under the rules and regulations of the F.P.C., discontinue or abandon delivery of the stream. They justly regard the money received by the extraction companies from the United States as a "benefit" to the former, but complain that it accrues to those companies not at the expense of the United States, but to the expense and detriment of themselves, the landowners or the lessee-producers.

The unjust enrichment claim is based fundamentally upon alternative premises: 1) that title to helium did not pass under the leases or gas purchase contracts and that the extraction companies have converted it to their own use and benefit; and 2) that the pipeline purchasers paid only for hydrocarbons, and paid no consideration for helium, and now having sold it for valuable and substantial consideration, must respond from those proceeds to their vendors, for the fair market value of said helium.

We have already disposed of both premises. We have held that title to helium passed to the pipeline purchasers under their leases and gas purchase contracts, and secondly, that payment for gas under those contracts was not limited to the hydrocarbon portion alone, but was intended and

received as payment for all constituents of the entire stream as produced from the well.

Landowners and lessee-producers find further support for their unjust enrichment argument in an alleged privileged position enjoyed by members of the helex group ever since the inception of the helium program. They argue that ever since Dr. Seibel's report in 1956, proposing the construction of extraction plants on large-volume pipelines leading from the Hugoton area, the government program has been oriented to pipeline extraction plants, without regard to the ownership of helium and that independent producers were never seriously considered as probable processors of helium. It is further argued that the contracts ultimately executed by the extraction companies insulate the latter from virtually all economic risk providing guaranteed minimum sales for a 22-year period, at a guaranteed price, limited liability in the event of failure of title to helium, plus the realization of collateral economic benefits, such as decreased transportation costs of a gas stream from which inerts have been removed, and the removal of greater quantities of liquid hydrocarbons made possible by the extraction process.

The foregoing contract features and collateral economies would inure to the benefit of *any* party contracting with the United States in the conservation program. Assuming, *arguendo,* the contracts advantageously minimized the risks of undertaking helium extraction for the conservation program, and afforded participants favorable economies in other respects, these factors do not make the consequent enrichment of corporate coffers unlawful or inequitable as

to third parties in any manner cognizable at law.

In preparing cost build-ups as a basis for negotiating the helium purchase contracts, the Bureau included as one of the contractors' costs, two dollars per Mcf for recoverable helium contained in natural gas processed for extraction. It said:

"The initial unit price will be a negotiated price. On our side of the table, we will calculate what we consider to be a fair and reasonable price by first computing the estimated unit cost of extracting helium in a Government plant under similar circumstances, and then adding an amount to cover taxes, insurance, and any other costs applicable to a private plant, plus a 6½ per cent annual rate of return, after taxes, on the undepreciated plant investment. . . . In this calculation, we will include as cost items in a Government operation a payment of $2.00 a thousand cubic feet for recoverable helium in the natural gas processed, and an appropriate payment for fuel gas and other gas shrinkage in the plant."[218]

Two views may be taken of this allowance. The Director of the Bureau of Mines justified it to the General Accounting Office as the fair and reasonable value of helium in the stream, and a fair estimate of the helium cost the United States would incur in a government-owned plant. The Director wrote:

"In negotiating prices with the companies, the Bureau considered the helium in the natural gas streams prior to processing to be worth $2.00 a thousand cubic feet. Because the helium content of the gas to be processed by the companies varies from company to company and because 100 percent of the helium in the gas cannot be economically recovered, the equivalent value of the recoverable helium in the natural gas varies from company to company—averaging about $2.30 a thousand cubic feet.

[218] LPX 91, App. 33.

"We considered this as an item of cost in our calculations because in our chosen approach it would have been an item of cost in a Government plant. The basic $2.00 figure is not an arbitrary figure. The Bureau of Mines is presently paying the equivalent of this amount for the privilege of extracting helium from gas supplied by gas companies at the Government's Keyes, Oklahoma and Shiprock, New Mexico plants. * * *

"In view of the foregoing and in the light of abundant testimony by the Bureau of Mines before congressional committees relevant to the importance of helium, it is extremely unlikely that a value lower than $2.00 could be obtained either through negotiation or condemnation. *One might argue that helium currently wasted in fuel gases has no value, but such an argument becomes invalid when someone decides to extract the helium for conservation or sale. We believe the* $2.00 *figure represents a just and reasonable value for helium in natural gas processed for helium extraction, without regard to who does the processing . . . . Consequently, we did not require the companies to show that the* $2.00 *would be an item of cost, because we do not think it is pertinent.*"[219]

The Comptroller General viewed this allowance of $2.00 per Mcf for helium as mere profit to the contractors, totaling over the life of the contracts $144 million unjustified costs to the United States and equivalent profits to the contractors over and above the profits already provided in the cost build-up. In his report to Congress he stated:

"On the basis of our review of the Bureau's estimates of the contract unit prices, it appears that the Government will incur unjustified costs of at least $155 million. An equivalent amount will be received by the contractors as profits over and above the $158 million allowed as profits in the composition of prices prepared by the Bureau. Of the $155 million of unjustified costs, $144 million repre-

[219] LPX 182, p. 7.

sents special allowance for the helium content in the natural gas. . . . The special allowances were included in the Bureau's initial estimates without establishing that any associated costs would be incurred by the contractors, and the negotiation records do not show that the contractors requested or required the special allowance as an added profit payment for the value of the contained helium. [p.6.]

* * *

"We consider that it was inappropriate for the Bureau to have included in its estimates special allowances of $144 million for an element that was being dissipated when included in the natural gas sold as fuel. [p. 9.]

* * *

"The fact that an amount equivalent to the $2 special allowance per MCF had been paid as a fee for permitting the Government to extract helium from natural gas at the Keyes plant did not necessarily mean that such amount should or need be paid under an entirely different contract arrangement under which the contractors would otherwise be provided a profit for their participation in the program." [p. 10.][220]

It would appear that based upon the G.A.O. Report, landowners and the lessee-producers are contending that the extraction companies are being unjustly enriched, the former claiming it to be at the expense of the United States and its taxpayer, the latter deeming it to be at their own expense. The alleged enrichment of the extraction companies does not result from any breach of a legal or equitable duty owing to the lessee-producers or landowners. So far as appears, any profits result solely from the judgment

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[220] Comptroller General's Report, "Examination of Procurement of Crude Helium for the Helium Conservation Program under Negotiated Fixed-Price Contracts—Bureau of Mines—Department of the Interior." January, 1963. [LPX 185.]

of the Bureau of Mines in its estimation of the amount the Government determined its contractors would require to extract helium and this, in turn, was based upon the estimated cost to the United States to operate its own plants. In *Anderson* v. *Anderson,* 155 Kan. 69, 72, 123 P.2d 315 (1942), the court stated, quoting *University* v. *Forbes,* 88 N.H. 17, 183 Atl. 860:

> " 'The doctrine of unjust enrichment is that one shall not be allowed to profit or enrich himself at the expense of another contrary to equity. While it is said that a defendant is liable if "equity and good conscience" requires, this does not mean that a moral duty meets the demands of equity. There must be some specific legal principle or situation which equity has established or recognized, to bring a case within the scope of the doctrine.' "

A benefit is not unjust unless it is unlawful and the injustice must be one for which the law gives redress under its rules. The claim of unjust enrichment can only be made, if at all, by the United States and this it has not done. If the extraction companies are unjustly enriched by the United States, landowners and lessee-producers are not entitled to a share in the funds on the ground that it is at their detriment or expense.

SUMMARY

We summarize our conclusions respecting the claims of landowners as follows:

That landowners in each of the interpleader cases can sue and be sued herein as a single class, that the interests of all members of the landowner class in each case have been adequately represented by those named landowners appearing both individually and as representatives of absent

members of each class, and that division of each such landowner class into sub-classes is unnecessary to the adequate representation of the absent members of each such class;

That landowners are not barred by either waiver or estoppel from asserting that helium is not conveyed under their oil and gas leases;

That in any oil and gas lease or lease for gas only, under which natural gas is produced from any field involved herein, which gas is subsequently processed for the extraction of helium, the words "gas" or "gases" are used interchangeably to describe any naturally-formed aeriform substances indigenous to the underlying reservoir, which aeriform substances include helium; and the natural gas stream conveyed under those leases includes, except as reserved, both hydrocarbon and non-hydrocarbon elements and compounds, including helium;

That in these interpleader actions, the Court has no jurisdiction of landowners' claims against their co-defendant lessee-producers, for any separate or additional royalty for the helium constituent of the gas stream;

That the Court further has no jurisdiction to entertain landowners' claims for cancellation of the leases as to helium, for alleged breaches of implied covenants to market helium with reasonable diligence;

That landowners are not entitled to participate in the interpleader funds on the ground that plaintiffs are unjustly enriched at the expense and detriment of said landowners;

That Section 11 of the 1960 Helium Act Amendments did not abrogate the aforesaid leases, insofar as the conveyance of helium is concerned;

That royalty payments for natural gas paid and received by landowners under the lease agreements are not rendered illegal or insufficient as payment for helium because said payments were made by lessee-producers whose rates are regulated and approved by the Federal Power Commission.

We summarize our conclusions respecting the claims of lessee-producers as follows:

That named lessee-producers appear in each of the interpleader cases, both individually and as representatives of the class of lessee-producers described for each case, and that lessee-producers in each case may sue and be sued as a single class;

That defendant lessee-producers are not barred by waiver or estoppel to assert their claims to helium by their conduct respecting the contracts under which they sell and deliver natural gas to their pipeline purchasers, and that interpleading plaintiffs are likewise not barred by waiver or estoppel from asserting that their gas purchase contracts do convey and provide payment for helium;

That the natural gas purchase contracts under which lessee-producers sell and deliver gas to their pipeline company purchasers apply to and convey the entire natural gas stream, except as reserved, and the natural gas stream conveyed under those contracts includes both hydrocarbon and non-hydrocarbon elements and compounds, including helium;

That the parties to these contracts have not by their conduct with respect thereto, either expressly or impliedly amended, reformed, rewritten, or modified those contracts;

That payments received under those contracts by lessee-producers from their pipeline purchasers constitute payment for the entire natural gas stream measured and delivered thereunder, including both hydrocarbon and non-hydrocarbon constituents (including helium) of the stream, except as reserved to the seller;

That payments made and received under those contracts are not, thus, for hydrocarbons alone, or for British thermal units;

That the contracts thus construed are not so unconscionable, or against public policy, so as to be invalid and unenforceable under the circumstances;

That Section 11 of the 1960 Helium Act Amendments did not abrogate those contracts insofar as the conveyance of helium is concerned;

That payment for natural gas made and received under those contracts are not rendered illegal, or insufficient, as payment for helium because said payments are made at rates regulated and approved by the Federal Power Commission;

That no lessee-producer is entitled to recover, as payment for helium, the difference, if any, between any price stated in its natural gas sales contracts, or in any contract price resulting from an arbitration award, and the FPC-approved service rate being collected, whether the contract price is or is not approved for collection subject to refund;

That lessee-producers are not entitled to participate in the interpleaded funds on the ground that plaintiffs in interpleader are being unjustly enriched at their expense and detriment.

From all of the foregoing conclusions, it follows that the landowners' claims against the United States in Case No. W-3009 and Case No. W-3159 must fail. We have found that the landowners did, in fact, convey to their lessees all rights to helium, except as may be reserved, as a part of the natural gas stream. Lacking title, landowners' claims for conversion of helium under the Tort Claims Act, 28 U.S.C. §1346(b), must fail. Likewise, based upon the findings herein, their standing to claim a taking of *their* property without just and reasoable compensation, the reverse condemnation claim under the Tucker Act, 28 U.S.C. §1346(a)(2), must be denied.

COSTS

Rule 54(d), F.R.Civ.P., provides in pertinent part as follows:

> "Except when express provision therefor is made either in a statute of the United States or in these rules, costs shall be allowed as of course to the prevailing party unless the court otherwise directs; but costs against the United States, its officers, and agencies shall be imposed only to the extent permitted by law. * * *"

Allowance of costs to the prevailing party is not an inexorable rule, and the Court may, in its discretion, direct otherwise. We think these cases are particularly appropriate for such direction.

The issues which plaintiffs in the interpleader cases raised for determination are of considerable magnitude, both in the numbers of persons affected thereby, and their financial importance to all claimants to the funds. In each of the interpleader cases, plaintiffs have obtained, in net effect, an adjudication that quiets their title to all helium sold

to the United States. The possible rights of ownership of helium in other parties was recognized in each of the contracts from which the interpleader funds derive. The financial burden of any adjudication of liability adverse to plaintiffs was minimized by provisions in each contract requiring the United States to reimburse said companies for all amounts paid by them to any third party or parties found to own said helium, to the extent that such payments exceeded approximately three dollars per Mcf of contained helium.

The interpleading plaintiffs, because of their position in the gas industry are the beneficiaries of a decision of the United States to undertake the necessary conservation of helium. The government enlisted the participation of private enterprise and interpleading plaintiffs were advantageously circumstanced to so participate The plan to locate extraction plants on pipelines was formulated within the Bureau of Mines as the most efficient and expeditious means of helium conservation, without regard to possible ownership rights vested in other persons. The helium purchase contracts with the four extraction contracts were entered into, certainly, on the expectation that their ownership of helium and extraction rights was complete. Plaintiffs herein have undertaken to secure a final adjudication of those rights, and we think it only just and equitable that those parties bear the statutory costs (see 28 U.S.C. §1920), and the cost of notice to claimants (as hereafter ordered by the Court), all of which were incurred in obtaining a foreclosure of all other rights of ownership to helium which they sell to the United States.

NOTICE AND JUDGMENT

As stated earlier herein, supra, p. 25, we cannot determine in these cases the res adjudicata extent of the judgments to be entered here. However, it is in the interest of justice and economy of litigation, that the extent of the judgments entered herein be as broad as is constitutionally permissible, and this interest may be materially assisted by notice to all absent members of the classes of landowners and lessee-producers prior to entry of judgment.

Accordingly, within thirty days, prevailing counsel will prepare, circulate, and submit the following, consistent with the views expressed herein:

1. A form of notice to be given absent lessee-producers and landowners;

2. A form of judgment denying landowners' and lessee-producers' claims to the interpleader fund, dismissing, for want of jurisdiction or on the merits, the cross claims and counterclaims of landowners, and permanently enjoining said parties from asserting the claims disposed of in these actions; and further, in the suits against the United States, the motion of the United States for judgment is to be sustained. Such form of judgment shall include provision for taxation of costs in accordance with the Court's views, as expressed herein.

The foregoing findings of fact and conclusions of law are made in accordance with the provisions of Rule 52 of the Federal Rules of Civil Procedure.

Dated at Wichita, Kansas, this 7th day of September, 1968.

/s/ Wesley E. Brown
United States District Judge

OPINION OF COURT OF APPEALS

Filed March 2, 1971

(Consolidated Helium Cases)

NORTHERN NATURAL GAS COMPANY, et al.
(Helex Group)
Appellees and Cross-Appellants,
vs.
RALPH GROUNDS, HENRY HITCH, et al.
(Landowners),
Appellants and Cross-Appellees,
and
SOCONY MOBIL OIL CO., INC. (MOBIL OIL CORPORATION substituted) et al. (Lessee-Producers),
Appellants and Cross-Appellees.

APPEALS FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF KANSAS

The above caption was adopted in a court-approved stipulation. These 88 appeals are from a judgment entered in eight consolidated civil actions, all filed in, or transferred to, the United States District Court for the District of Kansas. In one aspect or another, each is a class action. For convenience, the parties are divided into four groups, (1) the landowners, (2) the lessee-producers, (3) the Helex group, and (4) the United States.

Before BREITENSTEIN, SETH and McWILLIAMS, Circuit Judges.

BREITENSTEIN, Circuit Judge.

Helium, a rare element found as a component of natural gas, has become in the last 20 years increasingly important to national defense, science and industry. through scientific and technical advances this inert and noncombustible gas, which was formerly wasted at the burner tips of gas appliances, now has great value. Congress recognized the need for helium by the Helium Act Amendments of 1960, Pub. L. 86-777, 74 Stat. 918, 50 U.S.C. § 167 et seq., which provide for a helium conservation program, with private participation, under the control of the Bureau of Mines, an agency of the Department of the Interior.

The natural gas fields of the Hugoton area in Western Kansas and the Oklahoma and Texas panhandles contain 99% of the nation's recoverable supply of helium. The landowners gave the leases under which the helium-bearing gas is obtained from the earth. The lessee-producers drilled the wells, produced the gas, and sold it to interstate pipelines which are under the jurisdiction of the Federal Power Commission. Affiliates and subsidiaries of the pipelines, the Helex group, separate helium from other gaseous components and sell the mixture to the United States. The Bureau of Mines stores the helium mixture and refines it to 99.99% pure helium for sale to government agencies and private industry. The basic issue is whether the landowners and the lessee-producers can receive benefit from the value of the helium. The trial court rejected all claims of the landowners and lessee-producers to the helium and gave judgment for the Helex group and the United States. See Northern Natural Gas Company v. Grounds, D.Kan., 292 F.Supp. 619. We reverse. In our opinion the Helex companies must

account to the lessee-producers for the reasonable value of the helium contained in the processed gas and the lessee-producers must pay royalty on such value to the landowners.

Six of the eight actions which were consolidated for trial are in the nature of interpleader. The fund in each suit is the money paid and to be paid by the United States to the interpleading plaintiffs for the helium-gas mixture produced and sold by them. Four of the cases were brought by Cities Service Gas Company, a pipeline. One was brought by Northern Natural Gas Company, a pipeline, and its subsidiary Northern Helex Company. In each of these five cases the defendants are named landowners and named lessee-producers in each instance as representatives of a Helium Corporation which is owned in equal shares by class. The sixth interpleader was brought by National Panhandle Eastern Pipe Line Company and National Chemical and Distillers Company. The defendants are Panhandle Eastern and named landowners as representatives of a class. Pursuant to a third-party complaint by Panhandle Eastern, named lessee-producers were brought in as representatives of a class. Motions to dismiss the interpleaders on jurisdictional grounds were denied by the trial court and we affirmed. Grounds v. Northern Natural Gas Company, 10 Cir., 327 F.2d 1003.

The remaining two actions were brought by named landowners, as representatives of their class, against the United States. One is under the Federal Tort Claims Act, see 28 U.S.C. §§ 1346 (b), 1402, and 2674, on the theory of conversion, and the other under the Tucker Act, see 28 U.S.C. § 1346(a) (2), on the theory of reverse condemnation.

All eight actions were maintained in the district court as class actions under Rule 23, F.R.Civ.P. One class is the landowners and the other is the lessee-producers. The district court held that the actions were properly maintainable as class actions. See 292 F.Supp. 619, 633-637. On these appeals no question is raised as to the propriety of the district court treatment of the cases as class actions.

After consolidation, there were extensive discovery proceedings, a definitive pre-trial order, and a 43-day trial limited to the question of liability. The trial court made full and detailed findings of fact which are found at 292 F. Supp. 619. For the sake of brevity in this opinion, we repeat only those facts which we deem necessary for understanding of the case and disposition of the issues. It is enough to say that we find no material dispute as to the determinative facts. The controversy is over the conclusions to be drawn from those facts and the application of the law thereto.

Helium is a colorless, odorless, and tasteless gas which, in the present state of scientific knowledge, will not react chemically or physically with any other element, except under laboratory conditions. The generally accepted theory is that helium is formed by radioactive disintegration within the earth and migrates to the same reservoir traps as do other gases. Through eons of time it has commingled with, and become diffused with, natural gas hydrocarbons which were formed from organic materials of ages past. Helium is noncombustible. It is the second lightest element found on earth, next to hydrogen which is highly combustible. Helium does not liquefy at standard atmospheric pressure

until it reaches -452.1 degrees Fahrenheit, almost absolute zero and lower than any other gas.

Helium was first discovered in the spectrum of sunlight in 1868. Sometime in the 1890's helium was found on the earth. In 1905, helium was discovered in gas from a well at Dexter, Kansas. Helium remained a laboratory curiosity until 1918 when the United States began commercial extraction of helium from gas produced in the Petrolia Field of Texas for use in military balloons and blimps during World War I.[1]

Before 1960, with minor exceptions, the production and marketing of helium was accomplished by the Bureau of Mines pursuant to the Helium Act of 1925, 43 Stat. 1110. Until the advent of World War II, the uses of helium outside of the laboratory were in lighter-than-air craft and, when mixed with oxygen, in medicine and deep-sea diving. During this period, the United States by purchase and condemnation obtained various rights under which it produced helium at government plants. The 1937 amendments, 50 Stat. 885, to the Helium Act of 1925, directed the Secretary of the Interior to purchase if possible all private helium plants. Under this authority the United States acquired two plants of the Girdler Corporation, the only private helium extraction operation in the country at that time.

During World War II the government constructed four plants to meet the greatly increased military need for helium. After the war all of the plants except one were

[1] For the history of helium and the programs of the United States for its conservation see Clifford W. Seibel's book "Helium—Child of the Sun," 1968, University of Kansas Press.

shut down. In the 1950's the demand for helium rose spectacularly. This came from a combination of new uses, including atomic weapons, nuclear energy plants, military and civilian rocketry, exploration of outer space, the field of cryogenics, welding of newly used metals, breathing mixtures for medical patients, divers and astronauts, and other uses connected with both science and industry. Because of the limited supply and the wasting of the known reserves, the government set up a Helium Policy Working Group under the chairmanship of Under Secretary of the Interior Chilson. The group recommended a program which envisaged participation by private industry. The 1960 amendments to the Helium Act were the result of these activities.

The record shows that, although helium is contained in either measurable or detectable quantities in gas found in a majority of natural gas fields in the United States, 99% of the nation's helium resources are in the natural gas reserves of the Hugoton area. 292 F.Supp. at 654. This area is approximately 210 miles from north to south, and 160 miles from east to west. It covers approximately 33,000 square miles and over 21 million acres. Underlying the area are about 15% of the known natural gas reserves of the United States. According to some of the testimony, it is the largest single, pressure-connected gas reservoir in the world. The helium content averages between .4% and .5% in volume. The economically recoverable helium is estimated at 119 billion cubic feet from estimated resources of a total of 36.4 trillion cubic feet of gas.

The components of natural gas produced in the Hugo-

ton area are about 85% hydrocarbons ranging from methane, the compound lightest in molecular weight but lowest in Btu (British Thermal Unit, a measure of heat) yield per unit of volume, through ethane and propane up to various heavier hydrocarbons. The remaining 15% is composed of non-hydrocarbon constituents including nitrogen, oxygen, argon, helium, hydrogen sulfide, hydrogen, and carbon dioxide. The composition of gas from separate wells is not constant. For example, methane runs from a low of 45.9% to a high of 82.6%, nitrogen from 6.5% to 44.3%, and helium from .22% to .97%.

The production of natural gas from underground reservoirs is accomplished by reservoir pressure, specifically the difference between the greater reservoir and lesser wellhead pressure causes the gas to flow through the well bore. The output of gas is produced in its entirety with all of its constituents randomly commingled. The separation of helium at the wellhead is not economically feasible.

The first gas well in the Hugoton area was completed in Texas in 1918 and was followed by Kansas and Oklahoma wells in 1922. Development of the fields in terms of completed wells was slow until the late 1920's and the early 1930's when the extension of pipelines into the area made it accessible to commercial markets. The productive geographical limits expanded gradually and were finally defined in the 1940's. The record shows that prior to 1954 there was 8,504 wells drilled in the area and an additional 1,538 wells in the period 1954-1959.

The gas is produced under leases given by the owners of the appropriate mineral rights. The trial court said that

65% of the leases were taken by lease brokers rather than by representatives of the producing industry. There are thousands of leases and a great variety of lease forms. The leases were either assigned to, or taken by, the companies within the lessee-producer group for development, production, and marketing. The lessee-producers sell the gas to pipeline companies which transport it interstate for resale. The gas is commonly delivered at the wellhead but occasionally at a gathering point and the volume is measured when delivered. The price is stated in terms of cents per Mcf, thousand cubic feet, and is commonly subject to quality adjustments depending on Btu content. Ordinarily, the sales by the lessee-producers are under long-term executory contracts containing price escalation, arbitration, or re-negotiation clauses.

The question of title to helium arose during the contract negotiations between the Helex companies and the Bureau of Mines.[2] The Helex companies agreed to warrant

[2] A March 5, 1962, memo by the U. S. General Accounting Office regarding negotiation of helium contracts contains this statement: "Mr. Wheeler [Assistant Director, Helium Bureau of Mines] advised that in cost negotiations, the contractors were allowed, as part of the unit price, a helium payment of about $2.00 a thousand cubic feet (MCF) of helium delivered because the natural gas companies believed that they could not warrant clear and unrestricted title to the helium. The companies contended that the gas rights owned permitted them to sell natural gas and not helium. Therefore, in order to provide for possible future payments to lessees, the companies insisted upon a helium payment of $2.00 a MCF for helium delivered. Although there has not been any known court cases on this subject, Mr. Wheeler stated that, in essence, this payment provides for a *contingency* in the event that (1) the companies are sued by lessees, (2) the court renders a decision that the companies do not have clear title to the helium contained in natural gas and (3) the companies are liable to pay third parties for the helium extracted from natural gas. (Over the life of the four negotiated contracts, this helium payment will amount to an estimated $125 million.)"

title and to indemnify the United States for all ownership claims of third parties. The ultimate cost each seller might have to bear because of title failure is limited by various contract provisions which were thus summarized by the trial court, 292 F.Supp. at 658:

> "The ultimate cost each seller [Helex company] might have to bear as a result of failure of title is limited, however, by provisions that the seller be reimbursed by the United States for all payments made in satisfaction or settlement of ownership claims to helium, to the extent that such payments exceed approximately $3.00 per Mcf of helium."

With this background we turn to the contentions of the parties. Other pertinent facts will be developed in the discussion of specific issues.

1. Landowners' Claims.

The landowners contend that the leases cover only combustible oil and gas. The trial court held that the grant of gas in each lease "extends to the entire gas stream which emerges at the wellhead absent an express reservation of any constituent products, and that helium passes thereunder unless expressly reserved."

There are estimated to be approximately 30,000 persons who receive income from the production of helium-bearing natural gas by virtue of ownership of land, mineral interest, royalty, or other interests. Thousands of leases executed on more than 150 printed forms cover the Hugoton gas. Over 75% of the leases were executed after 1940. Leases held by named lessee-producers have at least 50 different granting clauses. Six of these clauses are found in leases covering over 90% of the acreage. These were summarized thus by the trial court, 292 F.Supp. at 660:

KANSAS AND OKLAHOMA LEASES

	Percentage of Acreage
"oil and gas, casinghead gas and casinghead gasoline"	69.688
"oil, gas, casinghead gas, casinghead gasoline and all other gases and their respective constituent vapors"	10.132
"oil and gas"	7.144
"oil, distillate, gas, casinghead gas, casinghead gasoline and all other gases and their respective constituent vapors"	3.311
	90.275

TEXAS LEASES

"oil and gas"	39.860
"oil, gas and all other minerals"	25.517
"oil and gas, casinghead gas and casinghead gasoline"	14.545
"oil, gas, and all other minerals"	14.168
	94.090

Leases covering 99.99% of the acreage contain the words "oil" and "gas." Of the many different granting clauses the landowners regard only five as conveying helium as part of the gas. In these instances the language specifically covers all gaseous substances without regard to their similarity or dissimilarity to "gas" as used in the phrase "oil and gas." The most commonly used lease form

grants "oil and gas, casinghead gas and casinghead gasoline."[3]

By statute in each of the three states a conveyance of real estate passes the entire estate of the grantor unless an intent to pass a lesser estate expressly appears or is necessarily implied, K.S.A. § 58-2202, 16 O.S.A. § 29; Vernon's Ann. Rev. Civ. Stat. of the State of Texas, art. 1291. In Kansas and Oklahoma an oil and gas lease is a license, incorporeal hereditament, or profit a prendre. See Summers, The Law of Oil and Gas § § 161, 164 (1954) and the cases there cited. In Texas an oil and gas lease conveys

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[3] The pertinent provisions of this form are:

"1. That lessor, for and in consideration of the sum of One and No/100 Dollars ($1.00), in hand paid, and of the covenants and agreements hereinafter contained to be performed by the lessee, has this day granted and leased and hereby grants, leases and lets unto the lessee for the purpose of mining and operating for and producing oil and gas, casinghead gas and casinghead gasoline, laying pipe lines, building tanks, storing oil, building power stations, telephone lines and other structures thereon to produce, save, take care of and manufacture all of such substances, and for housing and boarding employees, the following described tract of land * * *.

"2. This lease shall remain in force for a term ending October 23, 1951, and as long thereafter as oil, gas, casinghead gas, casinghead gasoline, or any of them is produced.

* * * *

"4. Lessee shall pay lessor monthly as royalty: (a) on gas marketed from each well, one-eighth (1/8) of the proceeds if sold at the well, or, if marketed by lessee off the leased premises, then, one-eighth (1/8) of the market value thereof at the well; (b) on gas used by lessee for the extraction of casinghead gasoline, one-eighth (1/8) of the value of the natural gasoline content as determined by the Natural Gasoline Association of America revised contract, adopted April 4, 1939; * * *. Lessor shall have the privilege at his own risk and expense of using gas from any gas well on said land for stoves and inside lights in the principal dwelling located on the leased premises by making his own connections thereto.

* * * *

"8. The lessee shall have the right to use free of cost, gas, oil and water found on said land for its operations thereon, except water from wells of the lessor.* * * "

a fee simple determinable and is a "present conveyance of * * * the entire title to the designated minerals existing in the land." Andrews v. Brown, Tex. Civ. App., 283 S.W. 288, 291. For our purposes we see no difference in result whether the leases are considered as licenses or conveyances.

Our first problem is with the word gas. The trial court said that " 'gas' or 'gases' are used interchangeably to describe any naturally-formed aeriform substances indigenous to the underlying reservoir, which aeriform substances include helium. * * *" See 292 F.Supp. at 686. The learned dissertations of the parties on the derivation and use of the word gas during the last several hundred years is interesting but not conclusive. Gas is a generic term which is defined in Webster's Third New International Dictionary (G. & C. Merriam Co., 1961) as

> "1. A fluid (as air) that has neither independent shape nor volume but tends to expand indefinitely; a substance at a temperature above its critical temperature and therefore not liquefied by pressure alone.***"

As we see the problem, gas has two meanings, one in the physicist's sense conforming to the Webster definition and the other in the vernacular sense with the meaning dependent on the use of the word. The landowners point out that in the leases the word oil and the word gas are used in conjunction. They contend that the terms "oil" and "gas" taken together are used interchangeably with the term "petroleum." Accordingly, they say, gas must refer to a gaseous hydrocarbon. This is a non sequitur. It is an attempt either to rewrite the leases or to convert a claimed vernacular use into a subjective intent. Nothing

in the record shows that "oil and gas" or "petroleum" come from the earth as a pure hydrocarbon. The record does show that Hugoton gas contains noncombustible components. We doubt whether it is poss le to produce either oil or gas without at the same time producing some impurities.

The landowners' attempt to bolster their position by reliance on ejusdem generis is not persuasive. Ejusdem generis is a tool to be used in search for the correct meaning of words. Ordinarily it limits general terms which follow specific ones to matters similar to those specified. Gooch v. United States, 297 U.S. 124, 128. The landowners say that the word oil is specific and limits the meaning of gas. We believe that the word oil and the word gas have equal status. Navajo Tribe of Indians v. United States, Ct. Cl., 364 F.2d 320, 325, 327, to which reference will be made later, rejected the application of ejusdem generis in the construction of a lease of "all the oil and gas deposits." We agree.

The landowners say that the word gas is ambiguous. The argument seems to run like this. Gas has a physicist's meaning to describe a state of matter and a popular, or industry meaning, to cover a mixture of gaseous hydrocarbons. This brings us to the field of semantics. We agree that the meaning of a statement often requires a knowledge of its connotation and that the objective meaning of a word cannot be considered, ordinarily, separate and apart from the context of its actual subjective use. The argument goes that the landowners subjectively intended to grant combustible oil and gas and nothing else. All this does is to

lead us to the question of intent which we shall discuss later. In our opinion there is no ambiguity which calls into play the rule that oil and gas leases, when ambiguous, are construed against the lessees and in favor of the lessors. See e.g. Beatty v. Baxter, 208 Okl. 686, 258 P.2d 626.

Few decisions have any bearing on the specific issue. In Gilmore v. Superior Oil Co., 192 Kan. 388, 388 P.2d 602, the court was concerned with the deduction of compression expenses from gas royalties. In holding that a lessee could not withhold royalties in order to charge lessors with compression costs, the court commented that if a lessee desires complete coverage "of oil, gas, liquid hydrocarbons, or even helium gas * * * the lessee has the opportunity to protect itself by the manner in which it draws the lease." Ibid at 605. Relying on Curtis Publishing Co. v. Cassel, 10 Cir., 302 F.2d 132, 135, and like cases, the landowners say that this is a clear and unequivocal statement that an oil and gas lease not mentioning helium does not cover it and, so far as Kansas is concerned, is binding on federal courts. We are not convinced. Gilmore was concerned with duty to market, not with lease coverage. The statement is not considered dictum but is "comment merely obiter," see Hawks v. Hamill, 288 U.S. 52, 59, and is neither conclusive nor particularly persuasive.

The landowners emphasize the Oklahoma casinghead gas cases. Casinghead gas is nothing more than gas from an oil well. Mussellem v. Magnolia Petroleum Co., 107 Okl. 183, 231 Pac. 526, 530. The evidence shows that casinghead gas is composed of the lighter members of the paraffin series, largely methane with some ethane and

propane. Casinghead gasoline is composed of heavier elements of the same series.

Hammett Oil Co. v. Gypsy Oil Co., 95 Okl. 235, 218 Pac. 501, held that a contract for royalty on oil did not entitle the holder to royalty on gasoline manufactured from casinghead gas. Hammett and the cases which followed it are summarized in Broswood Oil Co. v. Sand Springs Home, 178 Okl. 550, 62 P.2d 1004, 1006, which states the effect of the Oklahoma rule to be that, absent a contrary intent of the parties, a reservation of royalty on oil and on gas "means oil in its ordinary acceptation and gas from a gas well as the same is ordinarily understood. * * *" The rule established in Hammett and its progeny has been subject to considerable criticism. Ibid. There appears to be some uncertainty in the Oklahoma cases concerned with the problem of whether casinghead gas is within a lease which covers both oil and gas.

For whatever the Oklahoma casinghead gas decisions may be worth and regardless of whether they are sound law, we believe that they are not applicable here. When the lease, or other agreement, provides for royalty on oil from an oil well and on gas from a gas well and casinghead gas is produced from an oil well, the recovery of royalty depends on whether gas emerging from an oil well is commonly understood to be oil. In the Hugoton area, helium emerges as a component of the gas produced from a gas well. It necessarily comes from the wellhead and into the transmission line with all the gases which make up the entire stream. Casinghead gas from an oil well is only inci-

dental to the production of oil and may be separated at the wellhead.

The situation in Texas is different. Lone Star Gas Co. v. Stine, Tex. Comm'n.App., 41 S.W.2d 48, was concerned with a deed covering "all natural gas." The question was whether natural gasoline was covered by the grant. The court held that it was and said that natural gas meant all the constituent elements composing the gas and that the grantee had the right to sell the gas in the form in which it emerged from the earth or to split it into its constituent elements and sell them. Taken literally, this language is broad enough to embrace helium in a grant of gas. The reasoning of the court, however, will not apply to helium. The court compared oil, gas, casinghead gas, and coal, and drew the premise that but for their distinction in natural form, these substances possess somewhat similar chemical properties and are readily convertible into gaseous hydrocarbons by artificial means. Helium is not a hydrocarbon and is not convertible into one.

The decision closest to our problem is Navajo Tribe of Indians v. United States, Ct. Cl., 364 F.2d 320, 324-327. The Tribe claimed that a 1923 lease "of all the oil and gas deposits" referred to gaseous hydrocarbons and not to helium. In the 1940's helium-bearing gas was produced and the Tribe was paid royalties. The Court of Claims found the Oklahoma casinghead gas cases unpersuasive and followed Lone Star. It said that although the parties may have been thinking of fuel-type gases, it was more realistic to presume that "the grant included not only hydrocarbons but the other gaseous elements as well." Our

principal difficulty with Navajo is that it treats the problem of whether the word gas includes helium as one of law. This may have been proper when dealing with tribal lands without regard to any state law impediment. We believe that this question is one of fact and of the conclusions which are to be drawn from the facts.

The only other helium case is Hoff v. Girdler Corp., 104 Colo. 56, 88 P.2d 100. We fail to see the relevance of that decision. The issue was whether the lessee had abandoned the lease. The question whether a grant of gas included helium was not raised.

In Hans v. Great Bend Brick & Tile Co., 172 Kan. 478, 241 P.2d 475, 478, the court said that a conveyance of all the "oil, gas and other minerals" did not include clay. Oklahoma has held that a reservation of "oil, petroleum, gas, coal, asphalt and all the other minerals of every kind and character" was not a reservation of underground water. See Mack Oil Co. v. Laurence, Okl., 389 P.2d 955, 961. A similar result was reached in Texas by Fleming Foundation v. Texaco, Inc., Tex. Civ. App., 337 S.W.2d 846, 852, which held that subsurface water was not within a grant of oil, gas and other minerals.

We believe that it is a fair interpretation of the cases just cited to say that in the three states intent is a question of fact. A plethora of evidence was received on the point. The landowners rely on the meaning of gas in both common and industrial usage. They presented a lexicographer who made a study of dictionaries, encyclopedias, area newspapers and selected magazine articles and stated his opinion that the word gas did not connote helium to the average land-

owner of the Hugoton area. Their opponents counter with an account of the helium development in the period from 1917 to World War II and emphasize that in federal oil and gas leases made after 1920 the United States expressly reserved helium. A recitation of all of the evidence would serve no good purpose. The trial court found that gas did not connote helium to the average landowner, that no landowner specifically contemplated helium in granting rights to produce gas, and that other evidence establishes "that he had no intention whatever respecting it." 292 F.Supp. at 664. Such findings are supported by substantial evidence and we must accept them.

The landowners say further that the value of natural gas lies in its use as a fuel, that helium is valueless as a part of a fuel stream, and that the average landowner could not have intended to convey helium for fuel purposes. The Helex companies, although conceding that the principal use of natural gas has been for fuel, point out that it has other uses of economic value such as a feed stock for petrochemical operations, the manufacture of carbon black, and as a pressuring agent in oil production. Six witnesses who had either taken leases or supervised such activities testified that to their knowledge no land man or lease negotiator had ever discussed the gas to be leased in terms of its constituents. The only lease making specific provision for helium was executed after the start of this litigation. The trial court said that this phase of the argument "is but an attempt to convert an uninformed popular notion respecting the commercial uses of natural gas into an intention by the lessor to convey only those discrete con-

stituents of the gas stream, the uses of which conformed to that notion." 292 F.Supp. at 665.

The trial court concluded its treatment of this part of the case by saying that, in view of the circumstances of lease execution, the definition and usage of terms within the industry, and the intentions of the parties as disclosed by their actions, the leases extend to the entire gas stream absent an express reservation, and helium passes thereunder unless expressly reserved. 292 F.Supp. at 669. The landowners contend that this conclusion is inconsistent with the finding that the average landowner had no intent with regard to helium.

We believe that the issue is whether general or specific intent controls. The claimed general intent is lease coverage of all components of the gas produced by the wells. The specific intent is said to be lease coverage only of combustible gas. General intent includes helium and specific intent excludes it.

Nothing in the leases shows an intent to convey only combustible gas. If that is what the lessors meant, they should have said so. The evidence of the landowners is that they know nothing of helium. If that is true, they could not have had any intent with regard to it. Reliance on specific intent is not compatible with denial of any intent. We believe that the search should be for general intent rather than for a supposed, but unexpressed, specific intent. General intent should be discovered not by defining and redefining the terms used but by considering the purposes of the grant in terms of enjoyment of the rights created.

See Comment. New Values Under Old Oil and Gas Leases: Helium Who Owns It? 62 Mich. L. Rev. 1158, 1169.

The landowners desired to profit by the production of gas from their lands. To attain this end they gave exclusive leases permitting exploration, development, production and marketing. The lessees drilled the wells and found gas. The gas came from the ground with all of its components and was measured at the wellhead. The gas was produced as a whole without separation of any of the components. Wellhead separation of helium was impractical.

In Utilities Production Corporation v. Carter Oil Co., 10 Cir., 72 F.2d 655, 659, a case concerning the right of an oil lessee to use residue gas for repressurization, we said that the argument that lease parties contemplated the use of gas "for such methods of operation and development as were known to the industry the day the leases were signed * * * " was specious, and that a "foresighted intent cannot be imputed to the parties, for they knew that improvements would come about during the terms of the leases, and must have contemplated the use of such improved methods." We believe that those principles apply here. It is true that we are dealing with a new use of a component of the gas rather than an improved method of production but we are aware of no reason why the result should be different.

In the final analysis, the effort of the landowners is to write into the leases an exception or reservation which is not found in the executed instruments. They seek to except from the leases the helium which they cannot produce themselves. The only way to obtain value for the helium

is to produce it, together with all other components of the gas, and run the gas through a separator. We will not import into the grants of oil and gas a subjective intent to convey only those components of the gas which comport to a subjective notion of the commercial end uses at the time of lease execution.

In our opinion general intent is closer to original intent than is specific intent which blossoms when a component previously regarded as an impurity becomes valuable. The discovery of the use and value of a component does not expand the grant but the expansion of that discovery into tangible value makes more certain the specific object of the general grant. We conclude that, absent specific reservations, the grant of gas by the leases covered all components of the gas, including helium.

In the interpleader actions the landowners have asserted alternative in personam cross-claims against the producers based on abandonment and an alleged breach of the covenant to market. The lessee-producers say that the court does not have jurisdiction of such claims, that abandonment is not present because neither intentional nor voluntary relinquishment of the leases has been shown, and that no breach of the covenant has occurred because after the market developed in 1962 they diligently pursued their rights to payment for the helium content. Interpleader jurisdiction is limited to the fund in controversy. Here the fund is the money paid and to be paid to the interpleading plaintiffs for the helium-gas mixture produced and sold by them. The cross-claims have no relation to that fund. Hence, jurisdiction is not established. See State Farm Fire

& Casualty Co. v. Tashire, 386 U.S. 523, 533-537, and Knoll v. Socony Mobil Oil Co., 10 Cir., 369 F.2d 425, 429, cert. denied 386 U.S. 977.

The Tort Claims case, based on conversion, and the Tucker Act case, based on reverse condemnation, are each dependent on the theory that the landowners have not parted with title to the helium. Our holding that the leases grant the helium removes the essential basis for each case and requires affirmance of the district court's dismissal of each.

2. Lessee-producers' Claims.

The lessee-producers have drilled the wells, produced the gas, and sold it to interstate pipelines whose Helex subsidiaries separate helium from many other components and deliver the resulting mixture to the Bureau of Mines for further refinement. The named lessee-producers represent a class of well over 500 oil and gas operators. The lessee-producers say that they are entitled to recover out of the interpleaded funds the reasonable value of the commingled helium. They concede that they must pay royalty to the landowners on any amounts so received. The trial court held that the Helex companies have no liability to the lessee-producers.

The parties stipulated that helium-bearing natural gas delivered to the Helex companies is gas purchased and transmitted for resale in interstate commerce, that all gas purchase contracts between the lessee-producers and the pipelines are filed with the Federal Power Commission (FPC) as rate schedules under the Natural Gas Act, and that all payments made by the pipelines to the lessee-

producers are at rates established, or permitted to be paid, by FPC.

The Natural Gas Act of 1938, 52 Stat. 821-833, 15 U.S.C. §§ 717-717w, placed the pipelines under FPC jurisdiction. In 1954 by its decision in Phillips Petroleum Co. v. Wisconsin, 347 U.S. 672, the Supreme Court held that independent producers[4] are natural gas companies within the meaning of the Natural Gas Act and subject to FPC jurisdiction. The lessee-producers are independent producers.

The Natural Gas Act provides that all rates and charges of natural gas companies "shall be just and reasonable." See 15 U.S.C. § 717c(a). After the Phillips decision, FPC required independent producers to file their contracts with the pipelines and the contract price was accepted subject to FPC review.

FPC regulation of the pipelines has been on a conventional, cost-of-service, public utility basis which was found undesirable in application to the independent producers. In its CATCO decision, Atlantic Refining Co. v. Public Service Commission of New York, 360 U.S. 378, the Supreme Court directed the FPC, in protection of the public interest, to hold the line on rate increases. Responsive thereto, the FPC established in-line rates on an area basis. These rates are specified in FPC Statement of Gen-

[4] FPC regulations, 18 CFR § 154.91(a) (1969), define independent producer as "any person as defined in the Natural Gas Act who is engaged in the production or gathering of natural gas and who sells natural gas in interstate commerce for resale, but who is not engaged in the transportation of natural gas (other than gathering) by pipeline in interstate commerce."

eral Policy No. 61-1, issued September 28, 1960. See 18 CFR § 2.56 and amendments thereto. The effect thereof is that FPC will not certificate initial rates, and will suspend increased rates, which exceed the prescribed levels. The service rates fixed for Hugoton were 11c per Mcf. FPC area rate making was upheld by the Supreme Court in Permian Basin Area Rate Cases, 390 U.S. 747. The record shows that in Area Rate Proceeding, et al. (Hugoton-Anadarko Area), Docket No. AR 64-1, the presiding examiner's decision, which we are told at argument has been approved by the FPC so far as pertinent here, fixed the service rates for wellhead deliveries in the Hugoton area at 12.1c in the Texas panhandle, 11.9c in the Oklahoma panhandle, and 11.3c in Kansas. The Helex group and the United States say in effect that these service rates fix the prices which the lessee-producers can receive from the pipelines for Hugoton gas, including its helium content.

The 1960 Helium Act Amendments authorized the Secretary of the Interior to make long-term contracts, not exceeding twenty-five years, for the acquisition, processing, transportation, and conservation of helium. The Bureau of Mines negotiated with pipelines controlling large volumes of helium-bearing gas. In 1961, contracts were made with Northern, Cities Service, and National, all of which are interpleader plaintiffs. Another contract later that year was made with Phillips Petroleum Company which is not an interpleader plaintiff but which was joined by the government as a third-party defendant in the landowners' Tort Claims and Tucker Act suits. Phillips was also brought in as a lessee-producer in two interpleaders but disclaimed

any interest in the fund. See 292 F.Supp. 629, 631-632. The Cities Service, Northern, and National extraction plants are all in Kansas. The Phillips plants are in Texas.

The contracts call for the construction of plants requiring capital investments of millions of dollars. The separation of helium from natural gas is accomplished by an expensive and complicated process whereby the gas is put under high pressure and is cooled to extreme temperatures. The other constituents of the gas liquefy and separate, leaving the helium and smaller quantities of other constituents as the remaining gas. The crude helium-gas mixture is defined in the contracts as "the gaseous product resulting from the helium extraction process . . . [and] comprised of helium predominately together with other constituents of the natural gas." In actual operations the delivered gas mixture is about 70% helium and 30% nitrogen. The gas mixture is transmitted by a government pipeline to the Cliffside, Texas, underground storage reservoir. When needed it is withdrawn and refined prior to sale to about 99.99% purity.

The contract prices apply only to volumes of contained helium. The initial prices, all subject to escalation, are $11.24 per Mcf for Northern Helex, $11.74 for Cities Service Helex, $11.78 for National Helium, and $10.30 for Phillips Petroleum. Under each contract the United States is obligated to purchase the total helium production for 22 years limited to stated annual dollar maximum amounts which are $9,500,000 in the Northern Helex contract, $9,100,000 in the Cities Service contract, $15,200,000 in the National Helium contract, and $13,700,-

000 in the Phillips contract. The refined helium is sold to both federal and non-federal users at $35 per Mcf, a price set by the Secretary of the Interior pursuant to the 1960 amendments.

The trial below was restricted to the issue of liability and no determination was made of the value of the helium-bearing gas. The court did point out that in the 1958 contract between the government and Colorado Interstate Gas Company for the Keyes plant "the contract requires that the United States pay the company $2.00 for the right to process sufficient gas to yield one thousand cubic feet of helium." 292 F.Supp. at 652. The evidence shows that in arriving at the unit prices in the Helex contracts the government negotiated "on the basis of costs comparable to those it would incur in a government-owned plant * * *" Ibid at 657. Included in the cost build-up was a payment of $2 per Mcf for helium "contained in natural gas delivered at the extraction plant for processing." Ibid. We express no opinion as to what such value actually is. For the purpose of this opinion, it is enough to say that recognition of helium value in the volumes of gas processed in the plants results in a price substantially higher than the FPC service rate.

The typical contract between a lessee-producer and a pipeline contains a recital clause, a definition of gas, a dedication of described acreage, reservations if any, a statement of quantities, pricing provisions in terms of Mcf ordinarily with escalation, arbitration, or negotiation provisions, quality standards based on Btu content and impurities, statement of duration of contract, methods of

measurement, billing and payment procedures, and warranties of title. The trial court's analysis of these contracts need not be repeated here. See 292 F.Supp. at 669-672.

The lessee-producers say that gas and natural gas as used in the contracts mean gaseous hydrocarbons and hence do not include helium. They rely on definitions found in Panhandle Eastern Pipe Line Co. v. Federal Power Commission, 8 Cir., 359 F.2d 675, 680-684, and Deep South Oil Company of Texas v. Federal Power Commission, 5 Cir., 247 F.2d 882, 888, and on various governmental publications and bulletins. The trial court, after referring to conflicting testimony of industry uses, found that no such usage existed and commented that no gas naturally occurring in the Hugoton area consists solely of hydrocarbons. See 292 F.Supp. at 672-673. We are bound by this finding because it is supported by substantial evidence and is not clearly erroneous.

Relying on the quality clauses calling for Btu adjustments, the lessee-producers argue that the pipelines purchased not natural gas but energy and that the energy is derived solely from hydrocarbons. The effect of these adjustments is emphasized in the separate brief of Pan American Petroleum Corporation which has a contract with Cities Service covering approximately 600,000 acres and 725 wells. Certain of the gas is unmerchantable unless mixed with other gas. Pan American says in substance that it is penalized by the price reduction and then Cities Service uses helium, one of the components causing the reduction, to make a profit.

In Permian Basin Area Rate Cases, 390 U.S. 747, 809-813, the Court approved quality adjustments dependent on Btu content. In our opinion provisions for such adjustments do not convert the contracts into sales of energy. The contracts provide for the sale and purchase of gas on a volumetric basis. The district court was correct in holding that "the plain language of contracts providing for purchase of *gas*" controls. See 292 F.Supp. at 676.

This brings us to what we consider to be the decisive point. Helium, a commodity not regulated in price, is produced as a component of natural gas which is price-regulated. The problem is whether the FPC service rate for natural gas includes the contained helium.

There can be no doubt of the power and duty of FPC to regulate the price of natural gas transmitted interstate for resale. The objective of such regulation is the protection of the consumer. The FPC has no interest in the components of the gas other than the effect which they may have on its quality as a fuel. The Bureau of Mines is concerned with prevention of helium waste which occurs when the gas consumers vent it into the atmosphere with fuel combustion residue.

Section 15 of the 1960 Helium Act Amendments, 50 U.S.C. § 167m, declares the purposes of the statute to be the encouragement of individual enterprise in the development of helium and the assurance of a sustained supply of helium for governmental activities. The Secretary of Interior is authorized to make long-term contracts for the acquisition, processing, and conservation of helium.

He has the eminent-domain power to acquire the helium in helium-bearing natural gas. A new basis is provided for establishing the price of helium. The owners of helium extraction plants may not sell to a private purchaser at a price lower than that paid by a government agency. The licensing of private sales is under regulations made by the Secretary. Appropriate provisions are made for financing the program.

The argument centers around § 11, 50 U.S.C. § 167i.[5] This says that the Natural Gas Act does not apply "to the sale, extraction, processing, transportation, or storage of helium either prior to or subsequent to the separation of such helium from the natural gas with which it is commingled." It also provides that in the determination of rates of a natural gas company there shall be excluded 1) all income from helium, (2) all direct costs in the extraction, processing, transportation, and storage of helium, and (3) the portion of joint costs allocated to helium "on a volumetric basis."

Senate Report No. 1814, 2 U.S. Cong. & Adm. News

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[5] This section reads in its entirety:

"The provisions of the Natural Gas Act of June 21, 1938 (52 Stat. 821; 15 U.S.C. 717-717w), as amended, shall not be applicable to the sale, extraction, processing, transportation, or storage of helium either prior to or subsequent to the separation of such helium from the natural gas with which it is commingled, whether or not the provisions of such Act apply to such natural gas, and in determining the rates of a natural gas company under sections 4 and 5 of the Natural Gas Act, as amended, whenever helium is extracted from helium-bearing natural gas, there shall be excluded (1) all income received from the sale of helium; (2) all direct costs incurred in the extraction, processing, compression, transportation or storage of helium; and (3) that portion of joint costs of exploration, production, gathering, extraction, processing, compression, transportation or storage divided and allocated to helium on a volumetric basis."

'60 3595, 3599, succinctly states the purpose of this section.

> "Section 11 covers the jurisdiction of the Federal Power Commission in this area. The section makes it clear that the Federal Power Commission retains its jurisdiction over natural gas containing helium but has no jurisdiction over helium itself."

Other legislative history confirms this purpose.[6]

The only decided case concerning § 11 is Panhandle Eastern Pipe Line Co. v. Federal Power Commission, 8 Cir., 359 F.2d 675. Panhandle applied to FPC for a certificate to use its pipeline system to transport gas to the National helium plant. The court said that plant shrinkage of the gas stream consisted of fuel gas, helium, liquefied hydrocarbons, and purge. FPC ordered Panhandle to amend its application to cover hydrocarbons which were liquefied and sold as well as the fuel gas. Panhandle sought court review and urged that the FPC order violated § 11. The court held that it did not and sustained the order on the basis that it applied only to the transportation of hydrocarbons, nor helium. The court reviewed the legislative history of § 11 and concluded that FPC had no jurisdiction over the helium either while commingled or after extraction and that such exemption does not prevent FPC from exercising jurisdiction over helium-bearing gas. Ibid at 679.

The trial court in the case at bar concluded that § 11 does not alter the scope of the gas purchase contracts and " * * * does not *require* that persons contracting for the

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[6] See House Report No. 1552, 88th Congress. Debates in the House and Senate are found in 106 Cong. Rec. pages 9089-9095, 15119-15125, 18536-18538, 18544-18546, 18602-18609, and 18902-18904. These appear in the trial record as Helex Ex. 281.

sale of gas contract separately for the sale of the helium constituent. It merely permits them to do so, and when they have not, the contract must stand as written." 292 F.Supp. at 680.

On the record presented, the denial to the lessee-producers of any recourse under the non-applicability clause of § 11 is startling. The evidence is convincing that 99% of the nation's recoverable helium supply is in the Hugoton area, that this area was about 95% developed before the 1960 amendments, and that, with insignificant exceptions, the controlling contracts had been executed long before 1960. The effect of the trial court's decision is to deny application of § 11 to the facts presented. We find nothing in the legislative history, and our attention is directed to nothing therein, which shows a congressional intent to deprive the lessee-producers of all benefit from the enhanced helium value, to deny the landowners royalty on the increased value of the gas produced from their lands, or to permit the pipelines to retain all profit from the helium value by obtaining the commingled helium at the FPC service rate.

The issue must be determined in the context in which it is presented. "The purpose of the Natural Gas Act was to underwrite just and reasonable rates to the consumers of natural gas." CATCO, 360 U.S. at 388. The Helium Act Amendments are designed to assure a sustained supply of helium for governmental and industrial needs. The Natural Gas Act and the Helium Act Amendments must, if possible, be reconciled to produce a "symmetrical whole." Panhandle Eastern Pipe Line Company v. Federal Power Commission, 8 Cir., 359 F.2d 675, 679.

Some incidental matters must be mentioned. Section 2(3) of the 1960 amendments, 50 U.S.C. § 167(3), defines "helium-bearing natural gas" and "helium-gas mixture" to mean respectively, "natural gas and gas mixtures containing three-tenths of 1 per centum or more of helium by volume." We find no pertinency in this because § 11, which relates to the applicability of the Natural Gas Act, uses neither phrase.

Section 5(a), 50 U.S.C. § 167c(a), authorizes regulations for licensing sales and transportation of helium and says that:

> "For the purpose of this section, the term 'helium' shall mean helium, after extraction from helium-bearing natural gas or helium-gas mixtures, in a refined or semirefined state suitable for use."

Section 5 has nothing to do with § 11. To read its definition of helium into § 11 would be to delete the words "prior to" from § 11 and the words "For the purpose of this section" from § 5.

The lessee-producers point out the familiar and common statement of the FPC in its rate orders that it is "acting pursuant to the authority granted by the Natural Gas Act." See e.g. Order No. 264, 29 F.P.C. 589. This is a statement of the statutory justification of the action taken. We find it of no pertinence in the reconciliation of the two statutes.

Section 11, after stating the nonapplicability of the Natural Gas Act, excludes from consideration in FPC rate determination all income from sale of helium, all direct costs pertaining to helium, and a portion of the indirect costs allocated to helium on a volumetric basis. In our opinion the purpose of these provisions is to encourage

private participation in the helium program by assurance that rate of return will not be determined by conventional FPC standards. The statute furnishes a profit incentive. The mentioned provisions do not detract from the preceding clause of § 11 declaring the nonapplicability of the Natural Gas Act. We find nothing in the record which indicates any use of the exclusions which would have effect on the construction of § 11.

The situation is that a nonregulated commodity (helium) is necessarily produced in conjunction with a regulated commodity (natural gas). The Helex companies insist that the price for the regulated commodity includes the nonregulated commodity. The lessee-producers emphasize the rule of rate regulation that there can be no deviation from the lawful rate for a regulated commodity or service. See United Gas Pipe Line Co. v. Mobile Gas Service Corp., 350 U.S. 332, and Montana-Dakota Utilities Co. v. Northwestern Public Service Co., 341 U.S. 246. They point to several decisions which hold that the furnishing of services was an improper deviation from ICC rates. See United States v. Wabash R. R. Co., 321 U.S. 403 (spotting freight cars in plant yard); Baltimore & Ohio R. R. Co. v. United States, 305 U.S. 507 (in-transit warehousing at less than cost); and Lowden v. Simonds-Shields-Lonsdale Grain Co., 306 U.S. 516 (installation without charge of grain doors in freight cars). The lessee-producers equate the nonpayment for the helium content of the gas with the noncollection of paid costs in the railroad rebate cases.

In answer the Helex companies say that under the Natural Gas Act the FPC fixes ceiling prices and does not

impose a flat rate. Although this is true, the ceiling rate, or the lower filed rate, is the lawful rate and there may be no deviation therefrom. See Western Union Telegraph Co. v. Esteve Brothers & Co., 256 U.S. 566, 571. Section 4(b) of the Natural Gas Act, 15 U.S.C. § 717c(b), forbids "any undue preference or advantage" to any person.

The Helex companies deny any prejudice or disadvantage. They say that the lessee-producers contracted to deliver the gas stream in its entirety and, absent an express reservation, the buyer gets the whole stream for such purposes as it may determine. The premise ignores the effect of the Natural Gas Act. Although the Act does not abrogate private rate contracts as such, see United Gas Pipe Line Co. v. Mobile Gas Service Corp., 350 U.S. 332, 338, it makes fundamental changes in those contracts. The rate must be just and reasonable and, if it is not, the FPC changes it. Provisions for price escalation or price changes by arbitration or renegotiation are rendered ineffective by regulations permitting summary rejection of increased rates based thereon. See Federal Power Commission v. Texaco, Inc., 377 U.S. 33. Contract provisions for period of duration are overriden by unlimited certificates, see Sunray Mid-Continent Oil Co. v. Federal Power Commission, 364 U.S. 137, 156, with the result that the grant of a certificate carries with it a dedication of the gas for the life of the field unless FPC approves withdrawal. Although the contracts are not abrogated, their provisions on price and term are superseded by FPC regulation.

The basis of the Helex companies' argument is that there is a contract sale of commingled helium when it is

sold as a component of the gas stream under FPC service rates. We are not persuaded. The protection of the Natural Gas Act is for the consumers, not the Helex companies.

In § 11 of the 1960 Helium Act Amendments, Congress has said that the Natural Gas Act is not applicable to helium operations "either prior to or subsequent to the separation of such helium from the natural gas with which it is commingled." In our opinion this means what it says and, if the Natural Gas Act does not apply, a service rate fixed thereunder does not apply to sales of contained helium.

The Helex companies read into § 11 a distinction between the sale of helium as a separate commodity and by a separate agreement and a sale of helium as a component of the gas stream. They argue that there may be an additional payment for helium in the first instance but not in the second. A sale of the commingled helium as a component of the gas stream is a sale of helium "prior to * * * the separation of such helium from the natural gas with which it is commingled." Accordingly, the Natural Gas Act, and the FPC fixed service rates, do not apply.

In oral argument, but not in briefs, the Helex companies say that if title to the helium passes under the contracts, interpleader jurisdiction does not lie to permit recovery by the lessee-producers, and they rely on State Farm Fire & Casualty Co. v. Tashire, 386 U.S. 523, 533-537, and Knoll v. Socony Mobil Co., 10 Cir., 369 F.2d 425, 429, cert. denied 386 U.S. 977. The interpleaded fund is the money paid and to be paid by the United States to the Helex companies for the helium gas mixture.

The lessee-producers claim a part of that fund on the ground that they have not been paid for the helium content of the gas. In our opinion this is a claim to the fund and is within interpleader jurisdiction. The situation is not changed by the fact that the claim covers only a part of the fund or by the fact that volume, and hence value, is measured at the delivery point. The situation is different from that confronting us in connection with the landowners' claims against the lessee-producers on the grounds of failure to market and abandonment. Those claims have no relation to the fund.

The lessee-producers argue that they are entitled to payment of the reasonable value of the helium under equitable principles of quantum meruit and unjust enrichment arising out of mistake. They emphasize the enormity of the mistake by saying that under the three contracts in the interpleaders a total of $743,600,000 will be paid for crude helium in a 22-year period and claim that $125,000,000 of that, as a bare minimum, represents the value of commingled helium before extraction. They contrast this with the negative or de minimis value which the parties mistakenly assumed it would be.

The Helex companies insist that the equities favor them. They say that they built the multi-million dollar extraction plants and assumed the necessary risks. They charge that the lessee-producers stood idly by while the risks were taken, the money invested, and the work done by others. In support of the principle that equity does not take from those who earn it and reward those who silently stand aside and await the success of the enterprise, they

cite the refreshing authority found in the folk-tale of the Little Red Hen.[7]

The lessee-producers answer that, if the remarks of the Little Red Hen are codified as a principle of equity, they are supported thereby because they obtained leases and conducted drilling, production, and delivery operations which placed the commingled helium into the hands of the Helex companies.

The activities of the Little Red Hen were not those of a public utility, and neither the product nor the ingredients thereof were subject to governmental rate regulation. Therein lies the difference. In our opinion private contract law and the principles applicable thereto are not controlling. This makes it unnecessary for us to delve into the many cases and texts bearing on the respective rights of parties to private contracts.

Common provisions of the gas purchase contracts call for periodic price escalation, arbitration or renegotiation. These provisions have been largely nullified by FPC regulations. The situation is illustrated by the plight of Ashland Oil & Refining Company which sells to Cities Service gas from over 100 Hugoton wells. The 1948 contract has a special price arbitration provision operative on 5-year periods. In 1961 the rate was raised to 12c plus 1.75c for gathering. In the 1966 negotiations for a new price Ashland offered to accept a price applicable to natural

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[7] As quoted in the brief of the Helex companies: "You remember that I planted the wheat and cut it, I threshed it and carried it to mill, I made the bread and baked it—and now all of you would help me eat it! No, indeed." See V. S. Hutchinson, Chimney Corner Stories (1925) 63, 65, published by Minton Balch and Company, New York.

gas under FPC jurisdiction plus a separate price for non-jurisdictional helium. Cities Service insisted on a single price because the contract did not provide for dual price structure. The matter went to arbitration under an agreement to include helium in the arbitrated price. The arbitrator fixed a price of 15c plus 1.75c for gathering. FPC suspended the rate and after suspension it went into effect subject to refund with interest. The Hugoton-Anadarko area rate proceeding fixed a price of 11.3c for non-gathered and 13.2c for gathered natural gas. The result shows the inability of a lessee-producer to use a price arbitration provision to secure payment for helium content of natural gas.

The trouble lies in the statutory jurisdiction of the FPC on the one hand and of the Department of the Interior, acting through the Bureau of Mines, on the other. The FPC has jurisdiction over natural gas produced, sold and transmitted interstate for resale. It has no jurisdiction over the price of helium. Phillips Petroleum Company v. Ashland Oil & Refining Company, 40 F.P.C. 390, 391-392. The Bureau of Mines has jurisdiction over the conservation of helium. It has no statutory power to fix the value of the contained helium delivered to the pipelines and their affiliates. In 1960 the greatest helium waste was by FPC protected consumers who vented the helium with fuel combustion residues. The FPC seeks to obtain the objectives of the Natural Gas Act through rate control, one aspect of which is the negation of price increase clauses. The lessee-producers cannot secure any increased value from FPC for the helium content of the gas which they produce and sell.

The lessee-producers fall into the void created by the two statutes. Neither the FPC nor the Bureau of Mines has jurisdiction over the helium value of the natural gas. Although the gas purchase contracts have not been abrogated, the price provisions thereof have been superseded by FPC rate regulation. The regulated lessee-producers must continue to sell the dedicated gas and have no statutory or contractual method of obtaining any benefit for the increased value. Two results are possible. The first is that the lessee-producers must deliver the gas at the FPC service rate, based on fuel value, and receive nothing for the helium value. This produces a windfall for the pipelines and their Helex subsidiaries. The second is that the lessee-producers are entitled to the reasonable value of the contained helium. This means that the landowners will receive royalties on the value of the helium produced from their lands and the lessee-producers will receive value for the helium content of the natural gas which has been produced by their efforts. We believe that satisfactory utility regulation requires the second result. Otherwise, a utility rate may be used to obtain a commodity or service which is not within the contemplation of that rate.

The allowance of a price, above the FPC service rate, for the helium content of Hugoton natural gas, does not adversely effect gas consumers. Their rights to just and reasonable rates are still protected by the Natural Gas Act and the FPC and are not increased by either recognition or payment of helium values.

In our opinion the reconciliation of the Natural Gas Act and of the 1960 amendments to the Helium Act to

attain a symmetrical whole requires the conclusion that the FPC service rates do not apply to deny recovery for the contained helium which is processed in the separation plants. Hence, the lessee-producers recover from the fund the reasonable value of the helium content of the processed gas and they in turn must pay royalty thereon to the landowners. We believe that this result is a valid reconciliation of the statutes and a proper determination of the rights of the parties.

Our conclusion that payment is required relates only to the helium content of the processed gas. The record shows that only about 44% of the produced gas goes through the separation plants. We do not intend that payment to the lessee-producers or royalties to the landowners should include anything for the helium content of the nonprocessed gas. The record does not show any market for the helium commingled with the nonprocessed gas.

The reliance of the Helex companies on the warranty of title provisions of the gas purchase contracts does not impress us. The claim of the lessee-producers is that the Helex companies have received the gas without paying for the helium content. In ordinary circumstances restitution or rescission might be an available remedy. Here, neither is practical or legally possible, but when payment is required and not made, the title fails just as surely as it does where either restitution or rescission is appropriate.

The Helex companies urge that the helium content cannot be traced back to the delivery points. The landowners and lessee-producers disagree. On the state of the record we reject the position of the Helex companies. The

helium content can be measured at the location of the orifice meters which determine the volumes. The lessee-producers seem to have no difficulty in determining volumes as a basis for royalty payments. Our attention is directed to nothing which makes the determination of the helium content either difficult or impossible.

One issue remains. The trial court assessed the costs, including attorneys' fees, against the fund. Such costs are estimated to be between a million and a million and a half dollars. The Helex companies say that such assessment of costs violates the principles stated in Hobbs v. McLean, 117 U.S. 567, 582. Our disposition of the case makes necessary reconsideration of the cost issue by the trial court. We express no opinion with regard thereto.

In No. W-3009, the Tort Claims action, and in No. W-3159, the Tucker Act action, the judgments are severally affirmed.

In the interpleader actions, the judgments are severally reversed and the cases remanded to the district court for further consideration in the light of this opinion.

The assessment of costs on these appeals is subject to future court action. The court notes that the 88 appeals have been presented and determined on a consolidated record. Within 14 days from the filing of this opinion, or such further time as the court may allow, the parties shall present their itemized and verified bills of costs, if any, and whatever statements they may care to make in regard to the division and assessment of costs.

JUDGMENT OF COURT OF APPEALS

Filed March 2, 1971

The caption to the above-numbered causes was adopted in a court-approved stipulation. These eighty-eight (88) cases came on to be heard from a judgment entered in eight (8) consolidated civil actions, all filed in, or transferred to, the United States District Court for the District of Kansas. They were argued by counsel to the Court for two (2) days.

On consideration whereof, it is ordered that the judgment of said United States District Court for the District of Kansas is severally affirmed in the above actions Nos. 367-69, 368-69, 375-69, 376-69, 383-69, 384-69. 393-69, 394-69, 401-69, 402-69, 490-69, 491-69, 498-69 and 499-69.

Upon consideration of the remainder of the actions, namely, Nos. 307-69, 308-69, 309-69, 310-69, 311-69, 312-69, 313-69, 314-69, 315-69, 316-69, 317-69, 318-69, 319-69, 320-69, 321-69, 322-69, 361-69, 362-69, 363-69, 364-69, 365-69, 366-69, 369-69, 370-69, 371-69, 372-69, 373-69, 374-69, 377-69, 378-69, 379-69, 380-69, 381-69, 382-69, 385-69, 386-69, 387-69, 388-69, 389-69, 390-69, 391-69, 392-69, 395-69, 396-69, 397-69, 398-69, 399-69, 400-69, 486-69, 487-69, 488-69, 489-69, 492-69, 493-69, 494-69, 495-69, 496-69, 497-69, 500-69, 501-69, 502-69, 503-69, 504-69, 505-69, 506-69, 507-69, 508-69, 509-69, 510-69, 511-69, 512-69, 513-69, 514-69, and 515-69, it is ordered that the judgments of said Court are severally reversed and the cases are remanded to the said District Court for further proceedings, in conformity with the opinion.

It is further ordered that, within fourteen (14) days from March 2, 1971, or such further time as the Court may allow, the parties shall present their itemized and verified Bills of Costs, if any, and whatever statements that they may care to make in regard to the division and assessment of costs. The assessment of costs is to be the subject of further action by this Court.

ORDER OVERRULING PETITIONS FOR REHEARING
Filed May 20, 1971

Upon consideration of the petitions for rehearing heretofore filed by the parties hereto, it is ordered that such petitions are denied.

The costs will be considered by this Court at a later date.

ORDER INVITING COMMENTS ON STAY OF MANDATE
Filed May 24, 1971

These cases are before the Court on the motion for stay of mandate of Northern Natural Gas Company, Northern Helex Company, Northern Gas Products Company, Cities Service Gas Company, Cities Service Helex, Inc., and Cities Service Cryogenics, Inc., (members of the Helex Group).

It is ordered that the mandate is stayed in all cases until June 10, 1971.

It is further ordered that all parties are directed to file with the Clerk on or before June 7, 1971, whatever statements they may desire with regard to:

1. Whether the stay shall apply to all 88 of the appeals which were consolidated for hearing in the Court of Appeals.

2. If the stay shall not apply to all of the mentioned appeals, to which appeals shall the stay be made applicable.

3. What bond, if any, should be required as a condition for the stay of mandate, and in what cases.

4. What objections, if any, there are to the grant of the stay to August 18, 1971, as requested by the moving members of the Helex Group.

LANDOWNERS' MOTION FOR LEAVE TO FILE PETITION FOR REHEARING OUT OF TIME

Filed June 8, 1971

Landowners respectfully show to the Court that on May 11, 1971, the Supreme Court of Oklahoma handed down its opinion in *Panhandle Cooperative Royalty Co., et al. v. Cunningham, Ex'x., et al.,* 42 Okl. Bar J. 1239, which decision is probably in conflict with the decision of this Court entered March 2, 1971.

Landowners pray for permission to file the petition for rehearing hereto annexed.

It is believed that this procedure is authorized by *Sun Oil Co. v. Burford,* 5 Cir., 130 F.2d 10; *Yanow v. Weyerhaeuser Steamboat Company,* 9 Cir., 274 F.2d 274 and *Cahill v. New York, New Haven & Hartford Railroad Co.,* 351 U.S. 183, 100 L.ed. 1075, 76 S.Ct. 758.

LANDOWNERS' PETITION FOR REHEARING

Filed June 8, 1971

In its opinion the Court held the Oklahoma casinghead cases inapplicable to the case at bar. (Slip opin. p. 29)

On May 11, 1971, the Supreme Court of Oklahoma handed down its opinion in *Panhandle Cooperative Royalty Co., et al. v. Cunningham, Ex'x., et al.*, 42 Okl. Bar J. 1239.

That suit was an action by a mineral owner to quiet title to all minerals "other than oil and gas and other hydrocarbon type minerals." The defendants contended that their deed covered also all minerals of every kind and character. Defendants claimed under a mineral deed conveying "all oil, gas and other minerals." The trial court entered judgment for plaintiffs as prayed. The Supreme Court modified the judgment by excepting also all minerals produced with oil and gas.

The court reviewed some of the casinghead cases, held that the addition of the words "and other minerals" "has a special purpose in extending the connotation of 'oil and gas' only." (*Infra* p. 17) The court held that the addition of the words "other minerals" to "oil and gas" had the effect of extending the grant to all minerals whether hydrocarbon or nonhydrocarbon which emerge as a constituent or component of gas as it emerges from the wellhead.

The decision makes plain that in the absence of the words "other minerals" no mineral other than oil and gas as generally understood in common parlance would have been covered. In the case at bar the trial court found that

"oil and gas" had no connotation of helium. (Slip opin. p. 33-34)

Less than four per cent of the Kansas and Oklahoma leases contain the words "other minerals." LOX 839, App. Vol. III, pp. 1125-1128. On the other hand, 55.775 per cent of the Texas leases contain such words. LOX 840, App. Vol. III, pp. 1129-1131. Of the total acreage involved in all three states only 18.118 per cent is covered by leases containing the words "other minerals" or their equivalent. LOX 838, App. Vol. III, pp. 1120-1124.

The recent Oklahoma decision reaffirming the casinghead cases makes relevant this Court's failure to follow them. The rule of those cases is not limited to casinghead gas. In *Mid-Continent Petroleum Corp. v. Blackwell Oil & Gas Co.*, 159 Okl. 35, 15 P.2d 1028, the rule of the casinghead cases was applied to drip gasoline condensed from gas produced from a well producing gas alone. As this Court points out (Slip opin. pp. 27-28), such gas is not casinghead gas, but is gas identical to that discussed on page 29 of the slip opinion. The distinction attempted to be made on that page of the opinion is not valid.

The theory of general intent adopted by the Court, citing Values Under Old Oil and Gas Leases: Helium Who Owns It? 62 Mich. L. Rev. 1158, 1169, (Slip opin. pp. 36-37) originated in The Law Relating To Oil and Gas in Wyoming, 3 Wyo. L.J. 107, from which it was copied almost word for word in the article cited by the Court. The original law review article relates to the question of whether a conveyance or a reservation of "minerals" includes oil and

gas. The article explains that in other jurisdictions the decisions are based upon determination of intent of the parties as of the date of the conveyance, citing cases from Kansas, Oklahoma and Texas. The author concludes that this rule of interpretation is unsatisfactory because of uncertainty, stating, "A rule which requires consideration of the contemporaneous factual or legal setting would create the impossible situation of requiring the title examiner to inquire into the local folklore of the area or of requiring the examiner to retain a catalogued knowledge of the law as to the dates of development." (*Infra* p. 39)

The author advocates a rule of "general intent" based upon the "manner of enjoyment" under which it is *assumed* as a *matter of law* that a grant or reservation of minerals conveys or reserves every mineral, known or unknown, which can be extracted without substantial interference with enjoyment of the estate in the surface. (*Infra* pp. 36-37)

The Michigan Law Review article makes the same assumption. "Applying this suggested general intent test to the problem of contained gaseous elements, it should probably be *assumed* that the parties intended to dispose of all elements that came from the well in a gaseous state by providing for 'gas'." (Emphasis supplied, 62 Mich. L. Rev. 1169)

Lacking either evidence or trial court finding on the subject, this Court necessarily made the same assumption, without saying so.

However appealing the theory of general intent in the interpretation of contracts may be, it is certainly a new

concept, which first received judicial approval in *Navajo Tribe of Indians v. United States,* Ct.Cl., 364 F.2d 320 (1966). All of the leases involved were executed long prior to that date.

In Kansas, Oklahoma and Texas, existing law, including the law relating to construction of contracts, is a part of every contract to the same extent as though written therein. *Securities Acceptance Corp. v. Perkins,* 182 Kan. 169, 318 P.2d 1058, 1061; *East Central Oklahoma Electric Coop. v. Public Service Co.,* Okl. 469 P.2d 662, 664; *Inter-Ocean Cas. Co. v. Lenear,* Tex.Civ.App., 95 S.W.2d 1355; *Farmers & Merchants Bank v. Federal Reserve Bank of Richmond,* 262 U.S. 649, 660; *Wood v. Lovett,* 313 U.S. 362, 370.

Even though the law may have been changed by judicial construction, contracts are to be interpreted according to the law in force at the time they were executed. *Bagby v. Martin,* 118 Okl. 244, 247 P.2d 404, syl. by the court; *Penner v. State,* Okl. 302 P.2d 144, 148; *Curtis v. Bagby,* Okl., 366 P.2d 616, 621.

Illustrative of the rule of interpretation in effect when the leases were executed are cases where objects sold contain other objects unknown to the parties. Where this occurs, "Unknown contents of the subject matter of a sale that are not essential to its existence or usefulness, but which are merely deposited therein, and which are not within the contemplation of or intention of the contracting parties, do not pass by the sale." *West Coast Airlines, Inc. v. Miner's Aircraft & E. Service,* 66 Wash.2d 513, 403 P.2d 833, 836.

"A sale must rest on mutual consent of the parties as to all its terms, including the identity of the thing sold. Where there is no consensus ad idem there can be no sale." *American National Bank v. West,* 31 Tenn.App. 85, 212 S.W.2d 683, 685.

In *Anderson v. Rexroad,* 175 Kan. 676, 266 P.2d 320, 323, the court said:

> "The established rule is that the intention of the parties and the meaning of a contract are to be deduced from the instrument where its terms are plain and unambiguous; * * that words cannot be read into a contract which import an intent wholly unexpressed when it was executed; and that the court may not make an agreement for the parties which they did not make for themselves."

Landowners feel that they have been deprived of their property by ex post facto judicial legislation.

Landowners submit that the interests of justice would be served by granting a rehearing in the light of the Oklahoma decision subsequent to the Court's opinion in the case at bar.

ORDER DENYING LANDOWNERS' MOTION
Filed June 9, 1971

These cases are before the court on various motions which are severally disposed of herein.

I — Motion of Landowners for leave to file a petition for rehearing out of time.

This motion was filed on June 8, 1971. Judgment was entered in all cases on March 2, 1971. An order was made on March 11, 1971, extending the time for petitions for rehearing to April 15, 1971. The court notes that the mo-

tion refers only to case No. 311-69 and does not use the caption approved by the court's September 10, 1969, order directing procedure. If the intent is to have the motion apply to all of the appeals, it is denied because it is untimely under Rule 40(a), F.R.A.P If the intent is to have the motion apply only to case No. 311-69, it is denied for the same reason.

OPINION OF SUPREME COURT OF OKLAHOMA, 42 OKLA. BAR J. 1239

PANHANDLE COOPERATIVE ROYALTY CO., et al. v. CUNNINGHAM, Ex'x. et al.

No. 42696. May 11, 1971.

(For Official Publication)

(Syllabus.)

1. Applying the statutory rule of interpretation that the intention of the parties to a written contract must be ascertained from the writing alone, if possible, and the related statutory rule that the contract must be taken as a whole so as to give effect to every part, using each clause to help interpret the others, a conveyance labeled "Mineral Deed Special" granting a fractional interest in "all of the oil, gas and other minerals" that may be produced from certain described lands, when considered with other provisions of the conveyance referring to commensurate monetary interests in existing and future oil and gas leases only, conveyed oil, gas and other minerals produced as oil or gas or produced as a component or constituent thereof, whether hydrocarbon or non-hydrocarbon and did not convey cop-

per, silver, gold or any other types of metallic ores or metallic minerals.

2. A conveyance labeled "Sale of Oil and Gas Royalty" granting "oil, gas, coal and other minerals," which provides for the right to explore and produce minerals in broad general terms and which declares the intention of the grantors to convey their interest in "all the mineral and mineral rights," but refers to commensurate monetary interests in existing and future oil and gas leases only, is ambiguous. When the grantees plead that such a deed is ambiguous and the intention of the parties was to convey copper, silver, gold, or any other types of metallic ores or metallic minerals, extrinsic or parol evidence may be introduced to explain the intention of the parties to an ambiguous deed.

Appeal from District Court, Jackson County; Weldon Ferris, Judge.

Action to quiet title by mineral owner, Plaintiff, and land owner, Defendant claiming to own all substances in certain lands except oil, gas and other hydrocarbon type minerals and all substances in certain other lands except oil, gas, coal and other hydrocarbon type minerals, against the claims of three Royalty Companies, defendants, asserting in addition ownership of copper, silver, gold and any other types of metallic mineral ores or metallic minerals. From a judgment quieting title in Plaintiff and landowner defendant, the Royalty Companies, defendants, appeal. Affirmed in part, as modified, reversed in part and remanded.

McBee & Benson, Howard McBee and Lloyd L. Benson, Frederick, for plaintiffs in error Panhandle Cooperative

Royalty Company and Flag Oil Corporation of Delaware.

Tomerlin & High, Granville Tomerlin and V. E. Stinchcomb, Oklahoma City, for plaintiff in error Farmers Union Cooperative Royalty Company.

Waldo T. Oden, Tal Oden and Larry Derryberry, Altus, for defendant in error Mary Cunningham, Executrix of the Estate of Anna Jarboe, deceased.

Richard W. Fowler, Fowler, Rucks, Baker, Jopling, Gramlich & Mee, Oklahoma City, for defendant in error Dede K. Prewitt.

McINERNEY, J. This is an appeal from a judgment of the District Court of Jackson County, Oklahoma quieting title in Mary Cunningham, Executrix of the Estate of Anna Jarboe, deceased (Plaintiff), and in Dede K. Prewitt, a defendant, against the claims to certain alleged mineral interests made by Farmers Union Cooperative Royalty Company (Farmers), Flag Oil Corporation of Delaware, successor to Flag Oil Company (Flag), and Panhandle Cooperative Royalty Company (Panhandle). The judgment rendered by the District Court was a judgment on the pleadings in which the parties are identified as they are identified above. The trial court retained jurisdiction of the controversy between Plaintiff and Dede K. Prewitt. Farmers, Flag and Panhandle appealed.

The conduct which it is alleged casts the clouds upon Plaintiff's and upon Prewitt's title was the conduct of Farmers, Flag and Panhandle as lessors in executing leases to Eagle-Pitcher Company, a corporation, (Eagle) as lessee, granting the right to Eagle in the lands described below, to prospect for, produce and market copper, metal and ore

bearing materials, and the conduct of Eagle in mining copper and silver ores as lessee in the leases executed by all parties to the controversy. Accordingly, the rights of Eagle are not in question in this appeal but due to the conflicting claims of the various lessors to royalties under the leases to Eagle, the royalty payments are being made by Eagle to a court appointed receiver.

The Jackson County lands involved are:

Tract 1: Lots 3 and 4 (The North Half of the Northwest Quarter) Section 4, Twp. 1 South, Range 22 W.I.M.;

Tract 2: The Southwest Quarter, Section 3, Twp. 1 South, Range 22 W.I.M.

The written instruments differ substantially in content. Plaintiff and Prewitt claim that the Farmers-Flag deed covering Tract No. 1, executed July 30, 1930, set forth in relevant parts below, did not grant and convey to the grantee and its successors in interest any substance or the right to explore for, discover, produce and own any substance other than oil and gas and other hydrocarbon type minerals. Farmers and Flag claim that their deed granted, in addition, the copper, silver, gold or any other types of metallic mineral ores or metallic minerals lying in, upon or under the land covered by the conveyance. The judgment of the court below validated the claim of Plaintiff and Prewitt under the Farmers-Flag deed.

The granting clause of the Farmers-Flag deed, which bears the label MINERAL DEED Special, is:

". . . have granted, sold, conveyed, assigned and delivered, and by these presents do grant, sell, convey, assign and

deliver unto said Grantees an undivided one-half interest in the proportion of three-fourth (¾) and one-fourth (¼) interest therein respectively to the said Grantees in and to all of the oil, gas and other minerals in and under, and that may be produced from the following described lands . . . together with the right of ingress and egress at all times for the purpose of mining, drilling and exploring said lands for oil, gas and other minerals and removing the same therefrom."

Other relevant provisions are:

"Said land being now under an oil and gas lease, executed in favor of not leased it is understood and agreed that this sale is made subject to the terms of said lease, and covers and includes . . . of all of the oil royalty, and gas rental or royalty due and to be paid under the terms of said lease insofar as it covers the lands above described.

"It is understood and agreed that one-half of the money, or other bonus, which is paid for any future oil and gas lease or leases, which may be placed upon the above described land and one-half of the money rentals which may be paid to extend the terms within which a well may be commenced under the terms of said lease or leases shall be paid to and be the property of the Grantees."

We are mindful of the rule announced in Hill v. Anderson et al., Okl. 363 P.2d 849 (1961) that motions for a judgment on the pleadings "are not favored by the courts, and pleadings asserted to state no cause of action or defense are to be construed liberally in favor of the pleader . . . If such pleading may be construed to state a cause of action, a motion for a judgment on the pleadings cannot be sustained merely because some allegations appear indefinite or express pure legal conclusions. First National Bank v. Humphreys, 66 Okl. 186, 168 P. 410." Farmers and Flag each alleged that the granting clause in their deed ". . . is to some extent ambiguous as to the exact type and

character of the various types of 'other minerals' intended to be conveyed thereby. In this connection, defendant further alleges that it was the intention of the parties at the time of said conveyance that grantor convey by virtue of said mineral deed to the grantees specified, without any restriction whatsoever, specified fractional interest in all grantor's right, title and interest in any and all minerals of any type and character whatsoever including any and all types of metallic minerals or ores which might be then present and thereafter discovered upon the property and premises described." Whether a contract is ambiguous so as to require extrinsic evidence to clarify the ambiguity is purely one of law for the court. Harjo Gravel Co. v. Luke-Dick Co., 19[illegible] Okl. 537, 153 P.2d 112 (1944).

We do not agree that the granting clause in the Farmers-Flag deed, considered in context, is, as alleged by Farmers and Flag, ambiguous. There are provisions in the Farmers-Flag deed that, considered in connection with the granting clause, limit the scope of the grant. We refer to the provision saying that if "said land" is under an oil and gas lease that the grant is made subject to the terms of said lease but covers and includes a proper share in oil royalty and gas rentals or royalty. Another provision declares how the grantee shall share in the benefits accruing from the execution of any future oil and gas lease or leases. It is thus certain that the parties were preoccupied with oil and gas, that oil and gas was dominating the attention and the intention of the parties to the conveyance. The label on the Farmers-Flag deed indicating the deed is a special form suggests the limited scope of the grant.

In taking the whole contract together so as to give effect to every part, 15 O.S. 1961, §157, there is one other recital in the granting clause that must be harmonized with the grant of oil and gas and with the provisions that refer to the monetary accruals from oil and gas leases. We refer to the expression "and other minerals" in the grant of "oil, gas and other minerals." The query is: if only oil and gas were to be granted why the expression "and other minerals?" May there be "other minerals" than those referred to as oil or gas, in one or more senses, 15 O.S. 1961, §160, produced as oil or gas, or as a component thereof from the same well bore through the same string of casing or through the annular space between two strings of casing? The answer is "Yes" and lies partly in the history of litigation over these terms. The Supreme Court has interpreted both clauses and provisions which sometimes did and sometimes did not contain the expression "and other minerals" in cases arising several years before the execution of the Farmers-Flag deed in 1930.

In Withington v. Gypsy Oil Co., 68 Okl. 138, 172 P. 634 (1918) the trial court sustained a general demurrer to plaintiff's petition. Plaintiff alleged that considering the royalty provisions in the oil and gas lease together, the provision that applied to "gas from any well producing gas" covered casinghead gas from an oil well. Had the expression "and other minerals" been inserted after the word "gas" so as to read "gas *and other minerals* from any well producing gas" there would have been no basis for a controversy between the lessee, Gypsy, and the lessor, Withington.

In Wolf et ux. v. Blackwell Oil & Gas Co. et al., 77 Okl. 81, 186 P. 484 (1920), the grant in the lease was

"oil, gas and other minerals." One royalty provision required payment "to lessor of one tenth of all oil or other minerals." The dispute arose over whether this provision applied to gas well gas from which natural gasoline was processed. The court held that the provision did not so apply perforce "ejusdem generis." No basis for a dispute would have existed had there been one royalty provision applying to "oil, gas, and other minerals."

In Hammett Oil Company v. Gypsy Oil Company, 95 Okl. 235, 218 P. 501 (1921), one question was whether a lease covering "oil and gas" thereby covered casinghead gas when the only provisions for royalty were 1/8 of oil and $250.00 for gas wells. This Court held that casinghead gas was not covered by the lease. The expression "and other minerals" in the granting clause would have required an opposite result insofar as the court's construction of the original oil and gas lease.

In Mullendore et al. v. Minnehoma Oil Company et al., 114 Okl. 251, 246 P. 837 (1926), the issue was whether a lease granting the premises for the sole and only purpose of mining oil and gas, granted the right to produce casinghead gas from an oil well. The court held it did not grant such right. The addition of "and other minerals" in the granting clause and the addition of a royalty provision for casinghead gas would have required an opposite result.

George et al. v. Curtain, 108 Okl. 281, 236 P. 876 (1926) involved the same issue as that involved in Mullendore, supra.

It is indeed apparent from a consideration of the cases

we have just cited that in contracts dealing with the production and utilization of oil and gas, the expression "and other minerals" has a special purpose in extending the connotation of "oil and gas" only.

We hold that the granting clause in the Farmers-Flag deed is not ambiguous when construed by taking the conveyance as a whole so as to give effect to every part, using each clause to help interpret the others. 15 O.S. 1961, §157. That § 157 as well as others in Chapter 3 of Title 15 apply in the interpretation of contracts like the conveyances here involved, is well settled. Cronkhite v. Falkenstein, Okl. 352 P.2d 396, 398 (1960).

The cases are legion that apply the requirements of 15 O.S. 1961, §157 to take the whole of a contract so as to give effect to every part, using each clause to help interpret the others and that apply the related rule of interpretation, 15 O.S. 1961, §155, that the intention of the parties is to be ascertained from the writing alone, if possible. Wolf et ux. v. Blackwell Oil & Gas Co. et al., supra; Withington v. Gypsy Oil Co., supra; Hicks et al. v. Mid-Kansas Oil & Gas Company, 182 Okl. 61, 76 P.2d 269 (1938); Rose v. Cook, Okl., 250 P.2d 843 (1952).

We hold that the Farmers-Flag deed, so interpreted, grants the right to prospect for, discover, produce and own oil, gas and other minerals produced as oil or gas or produced as a component or constituent thereof, whether hydrocarbon or non-hydrocarbon, and does not grant any other mineral or the right to produce any other mineral including copper, silver, gold or any other types of metallic ores or metallic minerals.

The judgment of the trial court quieted title in Farmers and Flag in "oil, gas, and other hydrocarbon type minerals." We do not find the limitation of the scope of minerals in the deed so narrow. A limitation on the grant of minerals to hydrocarbons produced as oil or gas would not be implicit in the deed. We are judicially aware from scientific and other treatises that one or more substances emerge as a constituent or component of gas, produced from a gas well. Such substances necessarily come from the well head and into the transmission line with all gases that make up the entire stream. Separation at the well head is impossible. These minerals produced as oil or gas, or a component thereof, are not limited to hydrocarbons. Accordingly we modify the judgment in regard to Farmers and Flag to quiet title in these parties to the oil, gas, and other minerals produced as oil or gas or produced as a component or constituent thereof. We do not attempt to identify such minerals in this opinion; we do modify the limitation placed thereon in the judgment.

Concluding that the intention of the parties as revealed within the four corners of the Farmers-Flag deed is clear, we did not use "ejusdem generis" in our interpretation of this deed. The Plaintiff and Prewitt apparently contend that "ejusdem generis" is a rule of property or an absolute rule of law. Farmers and Flag urge that our decisions, involving the meaning of minerals vis-a-vis surface, may be sustained on other grounds than by the use of "ejusdem generis"; that our references thereto constitute dictum. "Ejusdem generis" is not a rule of property but a rule of construction useful in ascertaining the meaning of words of doubtful import. Merely because this rule of construction is used with other

rules of construction to interpret words of doubtful meaning does not render the application of the rule dictum. This rule of construction is a useful part of our law. See Cronkhite v. Falkenstein, Okl. 352 P.2d 396, 12 O&GR 681, 682.

We now consider the two Panhandle deeds, identical in form, each labeled Sale of Oil and Gas Royalty, one dated the 14th day of June, 1927 covering the south half of Tract 2; the other dated the 2nd day of July, 1927 covering the north half of Tract 2 and other lands not involved in this action. Plaintiff and Prewitt claim that neither Panhandle deed conveyed and granted to Panhandle and its successor in interest, Flag, any substance or the right to explore for, discover, produce and own any substance other than oil, gas, coal and other hydrocarbon type minerals.

Panhandle and Flag claim that the Panhandle deeds granted, in addition, the copper, silver, gold, or any other types of metallic mineral ores or metallic minerals lying in, upon or under the land covered by the conveyance. The judgment of the court below validated the claim of Plaintiff and Prewitt under the Panhandle deeds. The granting clause in each Panhandle deed is:

". . . have granted, bargained, sold, conveyed and set over, and do by these presents grant, bargain, sell, convey and set over into Panhandle Co-Operative Royalty Company, its heirs, successors and assigns all the following property, estate, right, title and interest therein, to-wit:

"An undivided one-half interest in all of the oil, gas, coal and other minerals now, or at any time hereafter, lying in or under the following described tract of land (or any part thereof,) situated . . . Also an undivided one-half interest in all my right, title and estate under and by virtue of any oil and gas mining lease, or other mineral

lease, now or hereafter existing upon said premises, or any part thereof, including all rents and royalties accrued; and also the perpetual and irrevocable right, privilege and easement of entering upon said lands and searching for, drilling wells, sinking shafts, mining, digging, extracting, taking and carrying away all of the oil, gas, coal and other minerals in or under said lands, or that may be found therein or thereunder; and also the right to possession and use of so much of said premises at all times as may be necessary to the practical carrying out of the purposes and provisions of this grant."

The other relevant provisions are:

"It is hereby expressly declared that whereas the land, particularly described in this conveyance is understood to be subject to an oil and gas mining lease in favor of Assigns of Record it is intended that said outstanding lease is fully embraced in the general terms of this conveyance, so as to pass to, and vest in said Panhandle Co-Operative Royalty Company, a one-half interest, not only in the oil and gas, but also all rents and royalties therein reserved to the lessor, precisely as if said Panhandle Co-Operative Royalty Company had been, at the date of making of said lease, the owner in fee of a one-half interest in and to the lands described, and himself one of the lessors therein.

"And it is hereby expressly declared that is the true intent and purpose of this conveyance to pass to and vest in the said Panhandle Co-Operative Royalty Company an undivided one-half interest in all the mineral and mineral rights in the land first described herein, or that at any time may be found therein or thereunder, and all grantor's rights to operate for said minerals, and deal and contract with regard thereto, including the leasing thereof, as fully to all intent and purpose as if the said Panhandle Co-Operative Royalty Company was the absolute owner of the entire title and estate in said lands."

Panhandle and Flag each alleged that the Panhandle deeds are "ambiguous as to the exact type and character of

the minerals to be conveyed thereby, and this defendant further alleges that the intention of the parties at the time of such conveyance was that grantor convey to the grantee(s) one-half interest in all of grantor's right, title and interest in any and all minerals of any type and character whatsoever, including any and all types of metallic minerals or ores which might have been then present and thereafter discovered in said lands."

We agree that the Panhandle deeds are ambiguous and that parol evidence is permissible to clarify the ambiguity. Briggs v. Waggoner, Okl., 375 P.2d 896 (1962). In the light of the rule announced in Hill v. Anderson et al., Okl., 363 P.2d 849 (1961) the pleadings are adequate to require the trial court to hear and consider evidence that bears on the intention of the parties concerning the scope of the grant. While in the Panhandle deeds, the grant is to oil, gas, coal and other minerals, the parties' primary concern appears to remain with oil and gas (the grantees named their conveyances "SALE OF OIL AND GAS ROYALTY"). The grant in the Panhandle deeds of the irrevocable right to enter upon the lands to search for, drill, sink shafts, mine, dig, extract, take and carry away are as consonant with the conveyance of the specifically described minerals as with the sought-after metallic ores. Considering the face of the grant, the scope of the extension beyond oil, gas, and coal, if any, and particularly that clause purporting to describe the intention to pass "one-half interest in all the mineral and mineral rights," is not clear.

The label "SALE OF OIL AND GAS ROYALTY," considered in the relation to other provisions in the Pan-

handle deeds, enhances the doubt. In the light of claims made presently we may only speculate concerning the motivation that prompted the choice of such a label. Panhandle and Flag contend that the label is no evidence of intention and cite Colonial Royalties Co. et al. v. Keener et al., Okl. 266 P.2d 467 (1954), wherein we said, on page 470, that the label "has no bearing upon the intention of the parties expressed in the instrument . . . The terms of an instrument and not its name determines its character." On this matter we stand on our most recent expression in Crews et ux. v. Burke et al., Okl. 309 P.2d 291 (1957) wherein we said, on page 294, that "The fact that the instrument evidencing plaintiff's conveyance to the Burkes was denominated sale of 'Royalty' rather than a mineral deed is not of *controlling* importance." (emphasis supplied) Accordingly there may be circumstances which give the name of an instrument some importance. We do not exclude any fact which may properly bear upon determining the intention of the parties. We agree that the label of an instrument cannot control over the express terms of the deed. We do not agree that the form of the instrument, including the label, which was prepared by the grantee, may not be considered in its entirety to resolve the present ambiguity.

As to strip or open pit mining of copper and silver ores, nothing appears in the pleadings. However, during oral argument there seemed to be a tacit concession by all parties that the present operations by Eagle is strip or open pit mining. Neither is there anything in the pleadings about the extent of the destruction of the soil or of the use of the surface occasioned by open pit or strip mining. The answer to

an inquiry during oral argument left the extent of the destruction of the soil in doubt. In any event, the intention of the parties must be determined by resort to the events surrounding the execution of the deeds in 1927, rather than the actions of Eagle pursuant to its leases in 1963 and 1965.

This brings us to a consideration of Acker v. Guinn, Texas, 464 S.W.2d 348 (1971) decided by the Supreme Court of Texas February 10, 1971. Counsel for defendant Prewitt and counsel for Farmers and Panhandle each insist we should give serious consideration to this case. Counsel for Farmers and Panhandle filed a memorandum brief in specific response to Acker v. Guinn, assailing both the reasoning and the result of the case. The description of the conveyance in the Texas Supreme Court's opinion fits a description of the Farmers-Flag deed. It was held in Acker v. Guinn that notwithstanding the presence of iron ore, recoverable by strip mining, which had been known and recovered in Cherokee County, Texas since the Civil War, a grant of oil, gas and other minerals did not grant iron ore whose discovery could not be accomplished without a destruction of the surface, especially since there is nothing in the deed even remotely suggesting an intention of vesting in the grantee the right to destroy the surface. Moreover, as stressed by counsel for Farmers and Panhandle the jurisprudential base of the opinion is the view that, "The intention sought should be the general intent rather than any supposed but unexpressed specific intent and further than general intent should be arrived at, not by defining and redefining the terms used but by considering the purposes of the grant or reservation in terms of the manner of en-

joyment intended in the ensuing interest." The Texas Supreme Court cited Kuntz, The Law Relating to Oil and Gas in Wyoming, 3 Wyo. L.J. 107, 112. A more extended discussion of the same subject appears in Kuntz, Law of Oil & Gas, §13.3, pp. 305, 306.

Although the Texas Supreme Court followed the view that a grant or reservation of "minerals" is a grant or reservation to extract from the earth all substances valuable in themselves, the related view that a destruction of the surface by a recovery of the minerals should result in the payment of damages to the surface owner in an amount that represented the value of the destroyed surface, was not followed.

We express no opinion at this time on the conclusion reached in *Acker*. The Texas Supreme Court had the benefit of a record, and their opinion was based, in large part, on the evidence disclosed by the record. Since the trial court's judgment must be reversed as to the Panhandle deeds, the argument presented here in the abstract may be presented to the District Court in relation to the evidence. A determination of the merits of the view of the Texas Supreme Court as expressed in Acker v. Guinn, supra, when applied to the recovery of substances that destroy the value of the surface, may then be made on the basis of evidence.

For the reasons stated, we modify the judgment of the trial court as applied to the Farmers-Flag deed covering Tract No. 1 so that this deed granted only the right to prospect for, discover, produce and own, oil, gas and other minerals produced as oil or gas or produced as a component

or constituent thereof, whether hydrocarbon or non-hydrocarbon. As so modified we affirm the judgment of the trial court as to the Farmers-Flag deed.

As to the Panhandle deeds, one covering the north half, the other covering the south half of Tract No. 2, we reverse the judgment of the trial court and remand the case for further proceedings.

BERRY, C. J., and DAVISON, V. C. J., and WILLIAMS, JACKSON, IRWIN, HODGES and LAVENDER, JJ., concur.

WYO. L. J. 3:107

THE LAW RELATING TO OIL AND GAS IN WYOMING

EUGENE O. KUNTZ*

According to current expert and non-expert opinion, Wyoming has excellent prospects of becoming one of the great oil and gas producing states of the Union. If the pattern of production follows that established in other states, the volume of oil and gas produced will be accompanied by a corresponding volume of litigation and resulting legal problems which cannot be answered from existing local authority.

When confronted with the same situation in the past, other states have looked to traditional property law for analogy and guidance, seeking also to maintain a measure of consistency with established concepts. While the fixed

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rules of property law may have provided a skeleton upon which to build, it has been necessary to depart from them occasionally in order to meet the practical requirements of the oil industry, and thus a body of legal concepts has been assembled which is peculiar in its application to oil and gas. The development of this field, while not entirely orderly, has been a credit to the bench and bar of those states where early oil and gas production was also productive of novel legal problems.

Among the various states, however, the approach to the problems in the field has by no means been uniform, with the result that many conflicts exist among prevailing fundamental theories. If Wyoming develops into a great producing area, the Supreme Court of Wyoming will find itself in the peculiarly advantageous position of having the abundant experience of other states at its disposal, and may find it possible to avoid the embarrassing contradictions found in other jurisdictions where decisions were pioneer in character. It should be possible to do what the Wyoming Supreme Court has already exhibited a tendency to do, and that is to adopt no ready-made, comprehensive accumulation of decisions from another state, but to accept only those parts which will round out a body of law containing certain basic concepts for purposes of stability, yet having sufficient flexibility to meet the demands of practical considerations as technology and business methods in the field progress, and from which problems as yet unforseen may be treated with a minimum of difficulty and contradiction.

While the absence of local authority in the field of oil and gas may be of advantage to the judiciary, it is by no

means an advantage to the practicing attorney confronted with a problem in the field. Because theories vary so widely among other states, he can find no safety in unqualified generalization. Further, the atmosphere of urgency which surrounds oil and gas activity seldom permits exhaustive research and has also served to accelerate the legal evolutionary process in other states, so that the general practicing attorney has a difficult task in distinguishing the obsolescent from the evanescent concepts.

It is with these thoughts in mind that this, the first of a series of articles, is sumbitted, with the view of attempting to describe the pattern of Wyoming law and of respectfully suggesting a pattern where none is indicated.

The first problem encountered in the petroleum field concerns the nature of oil and gas, i.e., whether or not they are considered to be "minerals" as the term is commonly used, and what character of ownership is possible in oil and gas so long as they remain in the earth. Considering the first aspect of the problem, oil and gas are considered to be minerals in Wyoming when they are specifically mentioned in the grant or reservation, and as such they are part of the mineral estate capable of being severed from the surface estate.[1]

Although oil and gas may be considered to be minerals for other purposes, still a vexing problem arises when a grant or reservation is made in which the word "minerals" alone is used and no mention is made of oil and gas. It is a

[1] Ohio Oil Co. v. Wyoming Agency, 179 P. (2d) 773 (Wyo. 1947); Mineral Severance in Wyoming, 2 Wyo. L. J. 62 (1948).

question of extreme importance to the title examiner, particularly if the grant or reservation is remote in point of time. The remoteness in time may make the problem of construction or correction a more difficult one, and at the same time extends no comfort to the examiner in the light of the law relating to adverse possession of minerals. On the point of whether or not a reservation of "minerals" reserves oil and gas (or a similar grant conveys them) there is no direct Wyoming authority and the decisions in other states present a multiple choice. The choices range from an arbitrary holding that oil and gas are not included in the term "minerals" to an arbitrary holding to the contrary, with variations in between.

In Pennsylvania, the question was presented at an early date in the case of *Dunham and Shortt v. Kirkpatrick,*[2] and a conclusion was reached that a reservation of all minerals[3] did not include petroleum. This result was predicated upon the proposition that although petroleum is a mineral in the broad sense by general definition, if such a broad meaning of "minerals" be employed, then all inorganic substances, including water, sand, clay, etc. would be covered and the reservation would be as broad as the grant and therefore void. Instead of relying upon inflexible definitions which vary in breadth and character according to the source of the definition, the court considered that the term "minerals" should be given the meaning to it by all mankind, i.e. its meaning in common usage. In that day and time, it was

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[2] 101 Pa. 36, 47 Am. Rep. 696 (1882).

[3] ". . . excepting and reserving all timber suitable for sawing; also all minerals; also the right to take off such timber and minerals."

not difficult for the court to arrive at the conclusion that the "mass of mankind" would not consider petroleum as being embraced within the term "mineral." The court was purporting to apply an intention test and, in construing the language of the instrument, assumed that the parties used the term "minerals" as the "mass of mankind" would use it. In a subsequent decision, the court followed the *Dunham* case and held that *gas* was not a "mineral" within the meaning of a reservation using that term.[4] Although the *Dunham* case presents a rule of construction based upon *intention,* the Pennsylvania court has accepted it as a settled and arbitrary rule of *property* law to the effect that petroleum is not a "mineral" within the meaning of the term as used in reservations and grants, and refuses to upset it as so construed or to apply its rule of intention in the light of what the "mass of mankind" would consider to be mineral in modern grants.

The rule as so crystalized was applied with absurd results in the case of *Preston v. South Penn Oil Co.*[5] There, the Aetna Oil Company purchased the land in question in 1864 and drilled for oil without success. In 1876 it conveyed the land, "excepting and reserving thereout, unto the Aetna Oil Company, all mineral and mining rights and the incidents thereto whatever." Because there "was no evidence at the trial to show that the parties to the deed intended the word 'mineral' to include petroleum or gas, or that the word had acquired a meaning in conveyancing to include them," it was decided that petroleum was not reserved, on the basis

[4] Silver v. Bush, 213 Pa. 195, 662 Atl. 832 (1906).
[5] 238 Pa. 301, 86 Atl. 203 (1913)

of the settled rule of property law announced in the *Dunham* case. This result appears to be absurd because, from the history of the land, together with the fact that the reserving party was an oil company, which had used the land for purposes of exploring for oil and which would presumably be primarily interested in oil and its prospective discovery and production, it would seem that the language of the instrument with the attending circumstances would clearly indicate that the parties were thinking in terms of petroleum and therefore *did* intend to reserve it from the grant.

Even though it considers oil and gas to be minerals for other purposes,[6] the Pennsylvania court, as indicated, has consistently held that oil and gas are not minerals within the meaning of the term as used in instruments of conveyance, unless there is evidence showing a "clear intention" to include them. That the showing of intention must be a strong one is evident from the *Preston* case.

The so-called "Pennsylvania Rule" finds some support but variation in Ohio. There, in the early case of *Detler v. Holland*,[7] the court said: "Do the words 'other valuable minerals' include petroleum oil? The deed of conveyance was made in February, 1890, and it must be construed in the light of the oil developments as they then existed in the vicinity of the land. . . Oil was then produced in small quantities within from 10 to 20 miles of the lands, but there is nothing to show that the parties to the conveyance had any knowledge thereof." Relying upon the foregoing

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[6] Hamilton v. Foster, 272 Pa. 95, 116 Atl. 50 (1922).
[7] 57 Ohio St. 492, 49 N.E. 690 (1898).

proposition, together with the fact that the other terms of the grant applied peculiarly to solid minerals,[8] as well as reliance upon the *Dunham* case, the court held that a grant of "other valuable minerals" did not convey the oil and gas. In Ohio, then, oil and gas would or would not be included in a grant or reservation of the minerals, depending upon intention as derived from the instrument and from surrounding circumstances at the time and place of the grant, which would leave the question an open one in each case.

A recent announcement of a result like that in the *Dunham* and *Detlor* cases is contained in a case from Arkansas where the court was called upon to construe the recitals of instruments executed in 1892 and 1893.[9] The court concluded that as to modern conveyances, the reservation of "minerals" effectively reserves the oil and gas.[10] As to conveyances remote in point of time, however, the court took the position that "a contemporaneous construction is best and most powerful in law." The court quoted from the 1887 edition of Devlin on Deeds to the effect that petroleum was not included in a reservation of all minerals, and after reference to other decisions, it said "Although there were court decisions holding oil and gas to be minerals, such was not the general construction; and this was particularly true in a country where oil and gas were not given the slightest commercial consideration in connection with land

[8] "... of mining and removing such coal, ore, or other minerals, ... with the right to the use of so much of the surface as may be necessary for pits, shafts, platforms, drains, railroads, switches, side tracks, etc., to facilitate the mining and removal of such coal, ore, or other minerals, and no more."

[9] Missouri Pacific R. R. v. Strohacker, 202 Ark. 645, 152 S. W. (2d) 557 (1941).

[10] Citing Sheppard v. Zeppa, 199 Ark. 1, 133 S. W. (2d) 860 (1939).

values," finally holding that an 1892 and 1893 reservation "reserving all coal and mineral deposits in and upon said lands" did not reserve oil and gas.

In Indiana, the use of the word "minerals" without further definition in a conveyance creates an ambiguity which would permit the use of parol evidence to arrive at the intention of the parties at the time and place of the grant.[11]

From the original position taken in the *Dunham* case, several variations have evolved: (1) that oil and gas arbitrarily are not included in the term "minerals" unless a contrary intention is clearly shown, (2) that the intention of the parties controls as arrived at from facts and circumstances attending the grant, (3) that the construction given the instrument must be a contemporaneous one with emphasis upon the contemporaneous legal construction, and (4) that the unexplained use of the term "minerals" creates an ambiguity.

The line of authorities considered as being contrary to the cases just mentioned has its origin in the Tennessee case of *Murray v. Allard*.[12] In that case, the court came to a conclusion contrary to the result reached in the *Dunham* case and marked the line of departure between the two views. The conclusion that oil and gas are minerals was reached entirely on the basis of definition of the term "minerals" to "be determined from dictionaries and other similar sources," and, as to the question of the intention of the

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[11] Monon Coal Co. v. Riggs, 115 Ind. A. 236, 56 N. E. (2d) 672 (1944), rehearing denied, 57 N. E. (2d) 598 (1944).

[12] 100 Tenn. 100, 43 S. W. 355 (1897).

parties, the court said that the bulk of mankind would consider oil and gas to be minerals.

The Tennessee case has the greatest numerical following among the other states and hence has become known as the "majority rule." Implicit in the *Murray* holding and expressed in many of the cases following it, is the qualification that, if there is an evident intention to restrict the meaning of "minerals" so as not to include oil and gas, they will not be included.[13] Among the cases following the *Murray*

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[13] The following cases are representative, and not an exhaustive list of authorities:

Kansas: Roth v. Huser, 147 Kan. 433, 76 P. (2d) 871 (1938).

Virginia: Warren v. Clinchfield Coal Corp., 166 Va. 524, 186 S. E. 20 1936.

Michigan: Weaver v. Richards, 156 Mich. 320, 120 N. W. 818 (1909).

Oklahoma: Barker v. Campbell-Ratcliff Land Co., 64 Okla. 249, 167 Pac. 468 (1917); Crain v. Pure Oil Co., 25 F. (2d) 824 (C.C.A. 8th 1928).

West Virginia: Sult v. Hochstetter Oil Co., 63 W. Va. 317, 61 S. E. 307 (1908); Horse Creek Land & Mining Co. v. Midkiff, 81 W. Va. 616. 95 S. E. 26 (1918); Murphy v. Van Voorhis, 94 W. Va. 475, 119 S. E. 297 (1923); Norman v. Lewis, 100 W. Va. 429, 130 S. E. 913 (1926); Prindle v. Baker, 116, W. Va. 48, 178 S. E. 513 (1935); Burdette v. Bruen, 118 W. Va. 624, 191 S. E. 360 (1937).

Kentucky: (In spite of an early tendency to the contrary in McKinney's Heirs v. Central Kentucky Natural Gas Co., 134 Ky. 239, 120 S. W. 314 (1909) and Scott v. Laws, 185 Ky. 440, 215 S. W. 81 (1919), Kentucky's position, through strict application of former rules of construction, now approximates that in the Murray case.) Berry v. Hiawatha Oil & Gas Co., 303 Ky. 629, 198 S. W. (2d) 497 (1946); Federal Gas, Oil & Coal Co. v. Moore, 290 Ky. 284, 161 S. W. (2d) 46 (1941); Maynard v. McHenry, 271 Ky. 642, 113 S. W. (2d) 13 (1938).

Texas: Anderson v. Kerr Drilling Co. v. Bruhlmeyer, 134 Tex. 574, 136 S. W. (2d). 800 (1940); Humphreys-Mexia Co. v. Gammon, 113 Tex. 247, 254 S. W. 296 (1923); Elliott v. Nelson, 113 Tex. 62, 251 S. W. 501 (Comm. of App. 1923); Luse v. Parmer, 221 S. W. 1031 (Civ. App. 1920); Luse v. Boatman, 217 S. W. 1096 (Civ. App. 1919); Right of Way Oil Co. v. Gladys City Oil, Gas & Mfg. Co., 106 Tex. 94, 157 S. W. 737 (1913); cf. Carothers v. Mills, 233 S. W. 155 (Civ. App. 1921) in which the court considered the question of intention of the parties in using the term "minerals" to be a question for the jury.

case the results vary from an arbitrary holding that "minerals" include oil and gas[14] through equivocal conclusions, where an intention to include oil and gas was found to further support the conclusion, [15] to the view that "minerals" prima facie includes oil and gas, to be overcome by contrary intentions drawn from the context of the instrument,[16] as by application of the doctrine of ejusdem generis.[17]

Although the results in the cases in other states vary from one extreme to the other, there is a common thread running through them all. In each instance, except where a "settled rule of property law" was followed, the court purported to arrive at the intention of the parties. That the intention test as applied is completely unsatisfactory is demonstrated by the variety of results which flow from it. Further, such a test is completely without value for use in the future in determining the character of substances which remain unknown or are presently considered to have no intrinsic value.

The contradiction and conflict between the cases on the point arise from the very fact that the courts are seeking to give effect to an *intention* to include or exclude a *specific substance*, when, as a matter of fact, the parties had nothing specific in mind on the matter at all. It is submitted that an intention test is the proper one, but not as applied here-

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[14] Weaver v. Richards, 156 Mich. 320, 120 N. W. 818 (1909).
[15] Barker v. Campbell-Ratcliff Land Co., 64 Okla. 249, 167 Pac. 468 (1917).
[16] Burdette v. Bruen, 118 W. Va. 624, 191 S. E. 360 (1937).
[17] Prindle v. Baker, 116 W. Va. 48, 178 S. E. 513 (1935).

tofore. The intention sought should be the *general intent* rather than any supposed but unexpressed *specific intent*, and, further, that general intent should be arrived at, not by defining and re-defining the terms used, but by considering the *purposes* of the grant or reservation in terms of manner of enjoyment intended in the ensuing interests.

When a general grant or reservation is made of all minerals without qualifying language, it should be reasonably assumed that the parties intended to sever the entire mineral estate from the surface estate, leaving the owner of each with definite incidents of ownership enjoyable in distinctly different manners. The manner of enjoyment of the mineral estate is through extraction of valuable substances, and the enjoyment of the surface is through retention of such substances as are necessary for the use of the surface, and these respective modes of enjoyment must be considered in arriving at the proper subject matter for each estate.

Applying this intention, the severance should be construed to sever from the surface all substances presently valuable in themselves, apart from the soil, whether their presence is known or not, and all substances which become valuable through development of the arts and sciences, and that nothing presently or prospectively valuable as extracted substances would be intended to be excluded from the mineral estate.

A limitation upon the mineral estate should be that only those substances can be removed without compensation which can be removed without unreasonable injury to the enjoyment of the surface estate, i.e. without unreasonably

interfering with the uses for which the land is adapted. To this extent, the surface and mineral estates are not only mutually dominant, but are also mutually servient estates. The surface estate is burdened with the right of access, and the mineral estate is burdened with the right of the surface owner to insist that the surface be left intact and that it not be rendered valueless for the purpose for which it is adapted, by depletion of sub-surface or surface substances. This limitation upon the mineral estate renders innocuous the objection raised in the *Dunham* case that, if all the minerals in the broad sense be included in the reservation, then the reservation would be as broad as the grant and therefore void. Further, it does no violence to the intention of the parties. If the presence of oil and gas is not suspected, or if their value is not known at the time of the grant, it is admitted that the parties had no specific intention either to exclude them or include them. Since there was no specific intention on the matter, effect should be given to their general intentions, and that was to sever substances which become valuable only through extraction. The fact that oil and gas were not substances then considered to be valuable in themselves bears only upon one aspect of this general intention and not upon the associated intention to sever the fee into two separate estates, distinct in form and enjoyment.

Since the enjoyment of oil and gas is through extraction, it should be considered to be within a general grant or reservation of the minerals. Further, since its retention is not necessary to the enjoyment of the surface estate, i.e. its removal does not deplete the soil for surface purposes, nor does its extraction destroy the surface nor remove subjacent

support, oil and gas, therefore, should not only be considered to be within a general mineral grant, but also, in the absence of demonstrated special circumstances, should be subject to extraction without compensation to the surface owner. The only interference with the surface enjoyment is in the exercise of the right of access, which is not permanently substantial in character and which must exist by necessity.

A further limitation must be made upon the general proposition set out. Since minerals may be severed piecemeal, i.e. both as to type and location, if the language of the instrument indicates a specific intention to do so, then that intention must be given full effect. For example, where the purposes of the grant indicate that a specific type of mineral was intended to be covered, or where there is an enumeration of certain minerals having characteristics in common followed by "etc.," or where the description of the rights or removal are sufficiently specific to indicate that only a certain character of mineral was intended to be covered, then, in such cases, there is a specific intent present and it is expressed, although perhaps not with the desired clarity. In all other cases, i.e. where no specific intent can be found, the general intention to sever all substances valuable in themselves should be given effect.

Aside from the advantage of conforming more closely to the original intention of the parties, this proposed view also has the advantage of certainty without the disadvantage of being unreasoned in its certainty. In matters of land titles, and most certainly in the field of oil and gas where heavy expenditures of capital are incident to exploration, develop-

ment and production, certainty is of the utmost importance. A rule which requires consideration of the contemporaneous factual or legal setting would create the impossible situation of requiring the title examiner to inquire into the local folklore of the area or of requiring the examiner to retain a catalogued knowledge of the law as to dates of development. In either event, he could never be confident of his conclusion.

A supporting policy to be considered is that orderly production of oil, gas, or other valuable substances should be encouraged and favored wherever possible to contribute to the wealth and well-being of society in general and the community in particular. As petroleum and petroleum products grow in importance as military supplies, a consideration of national security should also be included in the policy favoring production. Obviously, the policy favoring production is best served by a rule which makes title t minerals most certain.

It should be pointed out at this point, also, that the discovery of new substances valuable in themselves would not serve to "expand the grant or reservation" but would only serve to make more certain the specific subject matter of a general grant.

Aside from arriving at a reasonable immediate result this concept is sufficiently flexible to be adaptable for use in coping with future problems. As shown by a review of the authorities, the effort to arrive at a specific intention concerning a specific substance has led to conflicting results in the case of oil and gas and, unquestionably, will lead to further confusion and conflict in the future as new valuable

substances are discovered. If some substance, heretofore thought to be valueless in itself, should suddenly become very valuable by virtue of a new scientific or technological development, nothing but uncertainty would confront the courts in determining whether or not it was included in a general grant of minerals if the conclusion were sought to be reached through definition or determination of intent to include the specific substance. On the other hand, the conclusion would be an easier one if the "manner of enjoyment" test herein submitted were employed.

Taking the most difficult case possible, assume further that the new substance, a mineral by scientific definition, is dispersed through the top-soil of a restricted area of the State, or lies immediately beneath such top-soil. Under these facts, the removal of the substance would involve extensive excavation and a destruction of the use of the land for its surface purposes. How, on the basis of specific intention, could a court ever feel at ease with a conclusion in either direction? On the basis of intended enjoyment, however, a solution is not too difficult. The rights of the surface owner to subjacent support and his right to the use of the top-soil in its place would have to be respected, and at the same time, the owner of the mineral fee should have a right of extraction. Since the right of extraction could only be exercised by destruction of the surface owner's enjoyment, it could only be accomplished with compensation for the damages to the surface estate. Such damages would not be measured by the value of the substance in its new use, but would be measured by the reduction in value of the land for its surface use, and this liability would arise because, in such case, the

exercise of a right of access to the mineral would unreasonably interfere with the surface use. Specific mention of the substance, however, together with the usual provisions for extraction, would demonstrate a specific intention to make the surface right subject to the rights of access for purposes of extraction and would not make the mineral owner accountable for necessary damage flowing therefrom.

A case like the hypothetical one just described arose recently in Arkansas where the court was called upon to decide whether or not bauxite was a mineral within the terms of a reservation of "all coal and mineral deposits in and upon said lands."[18] With three members dissenting, the court decided that bauxite was not included within the reservation because the existence of bauxite in Arkansas was not generally known in 1892 and 1896, the dates of the contract and the conveyance, respectively. In addition to such reason, it was observed that bauxite is generally extracted by the digging of open pits, and that if the grant to the surface owner were accompanied by a reservation which would render his estate valueless, the reservation would be as broad as the grant and void.[19] (The instrument contained a general provision for the right to enter and remove the mineral deposits without accounting for damages.)

The result in the Arkansas case is directly opposite to

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[18] Carson v. Missouri Pacific R. R., 212 Ark. 963, 209 S. W. (2d) 97 (1948).

[19] See also the reasoning Psencik v. Wessels, 205 S. W. (2d) 658 (Civ. App. 1947) (sand and gravel); and in Allen v. Heinatz, 212 S. W. (2d) 987 (Civ. App. 1948) (limestone). Re minerals recoverable only by open pit mining, see Ann: 1 A. L. R. (2d) 787.

the result urged herein under the "manner of enjoyment" test. The court, in its zeal to protect the surface estate from invasion, conferred upon the owner of such estate a valuable mineral deposit in addition to his farm land. As a result of the decision, the surface owner could extract the bauxite for his own benefit, which is not a traditional form of enjoyment by a surface owner and which could hardly have been intended by the parties. Under the test herein submitted, the court would have come to a contrary conclusion, complied with the general intention of the parties, and reached a result which would have been of some assistance in the determination of the character of future substances. Since the provision for entry and extraction without accounting for damage was general in nature, and since bauxite was not specifically mentioned, the right of the owner of the mineral estate to extract the mineral by open pit mining would be subject to the right of the surface owner to compensation for the loss of his land for farming purposes. If the mineral is of commercial value, this limitation to the right of extraction would not be prohibitive. Whether or not a specific mention of bauxite in the provision for entry and extraction without accounting for damage would be valid need not be decided here since such condition is not present in the oil and gas problem. It may be observed in passing, however, that if the court were to determine that such a provision made the reservation as broad as the grant and therefore void, it would be more reasonable to hold void the right of entry without compensation rather than to hold void the reservation of the mineral.

Turning to Wyoming authority, no case has been found

which deals directly with the question considered herein,[20] and the cases which fall within the general field are not sufficiently close to the problem to permit a conclusion to be reached with any confidence.

In *Ohio Oil Co.* v. *Wyoming Agency,*[21] the court uses the terms "minerals" and "mineral fee" as including oil and gas, but in that case, the reservation expressly included oil and gas.[22] Thus, oil and gas are considered to be minerals in the general sense, and it would not be inconsistent to hold that oil and gas are included within the general term "minerals" when used alone, but such conclusion does not necessarily follow.

In *Chittim v. Belle Fourche Bentonite Products Co.,*[23] the court quoted with approval two definitions of "mineral" in arriving at the conclusion that bentonite is a mineral.

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[20] An extremely strange factual situation is presented in *Denver Joint Stock Land Bank of Denver v. Dixon,* 57 Wyo. 523, 122 P. (2d) 842 (1942). There, the problem is present in the abstract, but it was not involved in the particular case. The exact language of all instruments is not shown because not material to the decision, but apparently "A," a remote grantor, conveyed a section of land and reserved all coal and other minerals with exclusive right to prospect for such mineral. There appeared in the record no later conveyance of the minerals by "A." A subsequent grantee, "B," conveyed the surface and a non-participating royalty interest, reserving "all minerals, oil and gas in, upon, or underlying said lands." A statement in the record indicated that an oil and gas lease had been given on the premises by one claiming under "B" and that there was production. "A" was not a party to the suit and his rights were not involved, but the court was careful to say: "No question as to the ownership of mineral rights prior to that deed is raised herein." The deed referred to was the conveyance by "B."

[21] 179 P. (2d) 773 (Wyo. 1947).

[22] "... reserve to themselves, their heirs and assigns, all minerals, mineral deposits, mineral oil and natural gases of every kind and nature contained in or upon said lands, the surface of which is hereby conveyed."

[23] 60 Wyo. 235, 149 P. (2d) 142, 146 (1944).

Those definitions are: ". . . any form of earth, rock, or metal of greater value while in place than the enclosing country or superficial soil;"[24] and "The real test seems to be the character of the deposit as occurring independently of the mere soil, valuable in itself for commercial purposes, that is, close enough to market to have value."[25] Again, it is possible to say that oil and gas are minerals under such definitions, yet it would not be inconsistent to add the words "at the time of the grant" to each definition, if the issue arose squarely between grantor and grantee. It is of some significance, however, that the term "minerals" was not defined in this opinion by scientific definition, nor by reference to other restrictive definitions which look to physical characteristics, but in terms of the intrinsic value of the substance. This type of definition lends itself naturally to the "manner of enjoyment" test presented herein.

It is entirely possible, however, that when an instrument between private parties is being construed, the court may consider that the problem is presented in a different medium and may be lured into the position of placing emphasis upon a rule of construction which seeks an intention to include specific substances. If this is done, the court will be adopting a position from which it can only move in specific cases with difficulty, and it will be adopting a questionable and short-sighted attitude which the experience in other states has demonstrated to be more productive of grief than justice.

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[24] Morrison, Mining Rights, 250 (16th ed. 1936).
[25] Lindley, Mines and Mineral Lands, 156 (2d ed. 1914).

MICH. L. REV. 62:1158

COMMENTS

NEW VALUES UNDER OLD OIL AND GAS LEASES: HELIUM, WHO OWNS IT?

It is a well known maxim among oil and gas lawyers that "a producing well always clouds a title and a dry hole cures it." A variation of that maxim might be applied to producing wells which may or may not include, as by-products of the primary mineral, other substances that are extractible and valuable. Of course, once production of by-products begins, conveyances give special attention to these resources, but many instruments executed before such development may be phrased in general terms without specific mention of substances unimportant when the conveyance was made. Even a recent instrument may lack specificity in this regard. Inevitably, as science develops new uses and commercially feasible means of extraction, questions arise concerning ownership of by-products. The feasibility of extracting helium from natural gas, coupled with the critical national need for helium, have occasioned one such dispute. A confused and conflicting history of decisions involving title to other elements and compounds provides the setting for resolving this contemporary issue of ownership.

I. THE PROBLEM IN CONTEXT

A. *Helium Facts and Lease Provisions*

Natural gas, in place and when brought to the surface, consists chiefly of methane. It also contains traces of other

elements and compounds.[1] These substances are alternatively considered to be either constituents or impurities of the natural gas. Labeling them, however, is of no particular aid to a determination of rights as between mineral owners and surface owners. Helium,[2] having become a strategic element in the space age, is one of the most valuable of the elements contained in natural gas streams.[3] Small quantities occur in the gas fields of Kansas, Oklahoma, and Texas.[4]

When not extracted from the gas stream, helium is wasted as the fuel gas is consumed. Approximately four billion cubic feet per year are presently so wasted.[5] At that rate, by 1985 the helium reserves of the United States will be insufficient to satisfy demand.[6] Being nonflammable, the helium component actually detracts from the heating capacity of natural gas; extraction, therefore, serves two purposes—conservation of helium for future use and production of a better fuel gas.[7] The current extraction process

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[1] Sullivan, *Oil and Gas Law* 15 (1955).

[2] Helium is an odorless, inert gas. It is a product of radioactive disintegration of radium. Leven, *Done in Oil* 607 (1941).

[3] The missile program is now using approximately 110 million cubic feet of helium per year. The element is especially useful for maintaining strength and rigidity as fuel is consumed. See *Relieving the Helium Bind,* Chemical Week, Sept. 9, 1961, p. 57.

[4] It has been estimated that almost all helium reserves of the western world are located within a 250-mile radius of Amarillo, Texas. *Id.* at 60.

[5] Pylant, *Helium: Its status Today and its Promise for Tomorrow,* Oil & Gas J., Feb. 5, 1962, pp. 98, 106.

[6] There is little prospect for discovery of new helium resources. U.S. Bureau of Mines, *The Helium Conservation Program* 5 (1962).

[7] Tests at Government helium plants have shown that helium extraction raises the BTU content of fuel gas from 850 to 858. *Industry Helps Put Helium to Aerospace Work,* Kansas-Oklahoma Oil Reporter, April 1963, p. 44.

is based on the science of cryogenics (literally, deep freeze).[8] Although this process has long been known and, in fact, used for the extraction of helium, for over forty years the federal government had a virtual monopoly in the extraction and sale of this valuable element.[9] Realizing, however, that Government operations were not extensive enough to guarantee adequate future supplies, Congress acted to encourage private production. The Helium Act Amendments of 1960[10] authorized the Secretary of the Interior to enter into long-term contracts with private industry for the purchase of helium.[11]

Four private companies have entered into agreements with the Government, and five plants are already in production.[12] Soon after the contracts were signed, questions of title arose.[13] Lessors have asserted that their leases do not convey title to the helium component of the gas stream

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[8] See generally Fisher, *Helium in Texas,* 37 Texas Bus. Rev. 111 (1963). Two other extraction processes have been recently developed; however, neither is currently in large scale use. One is a process of diffusion through quartz tubes, and the other is based on selective permeability. *New Helium-Recovery Method Holds Promise,* Oil & Gas J., April 22, 1963, p. 76.

[9] *Crises in Helium Puffs up a Boom,* Bus. Week, Oct. 7, 1961, p. 160.

[10] 74 Stat. 918 (1960), 50 U.S.C. § 167 (Supp. IV, 1963).

[11] The goal is to have more than fifty-two billion cubic feet of crude helium in storage by 1985. *Government's Helium Program Ready To Roll,* Chemical & Engineering News, July 9, 1962, p. 30. The program is designed to be self-liquidating, for the Government will sell the conserved helium at a price that will recover all the costs of the program. *Billion Dollar Helium Play Starts,* Kansas-Oklahoma Oil Reporter, Nov. 1962, p. 49.

[12] National Helium Corp., Northern Helex Corp., Cities Service Helex Inc., and Phillips Petroleum Co. (two plants). *Helium: Its Status Today and Its Promise for Tomorrow,* 60 Oil & Gas J. 98 (1962).

[13] Ten law suits are pending in federal and state courts of Kansas and Oklahoma. Approximately 15,000 royalty owners are involved, claiming the right to receive $1 billion. Wichita Eagle, Oct. 18, 1963, p. 1, col. 2.

and that extraction of the gas by the lessee creates liability for conversion. Lessees claim that the helium has been either expressly or impliedly included in the lease. The question has never been directly litigated. Only one reported case has involved title to helium.[14] In that case the parties appear to have assumed that helium was covered by the lease, the question at issue being whether an abandonment of the leasehold had resulted from lessee's shutting down his helium plant.

Although a large number of cases have dealt with questions of title to other incidental products extracted under deeds and leases of various minerals, the courts in deciding such cases have not been consistent and have not contributed to the formation of general principles which can be applied with certainty to products other than those giving rise to the particular disputes.[15]

Oil and gas lease provisions which give rise to this type of title litigation typically do not specifically provide for products other than oil, gas, and casinghead gas[16] or gasoline. The conveyancing clauses of leases which were involved in the casinghead gas litigation of thirty and forty years ago read "for the purpose of mining and operating for oil and gas . . . ."[17] The issue presented in those cases

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[14] Hoff v. Girdler Corp., 104 Colo. 56, 88 P.2d 100 (1939).

[15] Walker, *Defects and Ambiguities in Oil and Gas Leases,* 28 Texas L. Rev. 895, 899 (1950).

[16] Casinghead gas is gas from an oil well. It is found in the oil strata and supplies what is known as reservoir energy. See generally Glassmire, *Oil and Gas Leases and Royalties* 228-31 (2d ed. 1938).

[17] For a discussion of the development of oil and gas leases, see *id.* at 55-59. The leases herein discussed are variations of the "Producers 88" or "Mid-Continent 88" forms. For examples of those forms, see *id.* at 389-402.

was whether casinghead gas and its extractible gasoline was such oil or gas as was intended to be conveyed by the clause. The various jurisdictions have reached conflicting conclusions.

Although the litigation over casinghead gas ownership resulted in the specific inclusion in conveyancing clauses of that substance and its by-product, casinghead gasoline, these inclusions do not aid in resolving the question of ownership of helium and other non-hydrocarbon gases. Often, the phrase "all other minerals" is also included in the conveyancing clause, but courts usually apply the *ejusdem generis* principle to restrict coverage of the phrase to minerals of the same kind as oil and gas.[18] To avoid such restriction, a parenthetical "(whether similar or dissimilar)" has sometimes been added.[19]

The conveyancing clause which gives the widest gas coverage is the following: "For the purpose of drilling, mining and operating for, producing, and securing all the oil, gas, casinghead gas, casinghead gasoline and *all other gases and their respective constituent vapors* . . . ."[20] This clause, one similarly broad, or a clause which specifically excludes constituents ought to be used if the parties wish to assure that their respective rights will be determined by the lease itself.

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[18] The rule of *ejusdem generis* "is stated as follows: 'General words, following particular words, will not include things of a superior class.' " *Id.* at 173.

[19] McRae, *Granting Clauses in Oil and Gas Leases: Including Mother Hubbard Clauses,* 2 Institute on Oil and Gas Law and Taxation 43, 82 (1951).

[20] Emphasis added.

When a lease does not have a conveyancing clause which clearly establishes title, the "four corners" rule is usually applied. The royalty clauses are also considered relevant in determining the extent of the grant.[21] The typical "other royalty" clause provides: "Lessee shall pay to Lessor for gas produced from any well and used by the Lessee off the premises, or for the manufacture of casinghead gasoline, gasoline, *or any other product,* as royalty, one-eighth of the market value of such gas at the mouth of the well."[22] This provision demonstrates the intent of the parties to include all components of the gas stream in the grant, and the coverage of even the most narrow conveyancing clause would probably be extended to helium and other components if such an "other royalty" provision were used.

The gas royalty clause most commonly used, however, does not expressly provide for payments on products other than natural gas. It requires lessees to pay to their lessors one-eighth of the proceeds if sold at the well, or one-eighth of the market value at the well if marketed off the leased premises, as royalty on "gas . . . from each well where *gas only* is found."[23] Lessees' obligation to account to lessors under this clause is determined at the well,[24] and ownership of the full gas stream is for all practical purposes seemingly determined at the well-head.[25] In disputing

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[21] Reynolds v. McMan Oil & Gas Co., 14 S.W.2d 819 (Tex. 1929); McRae, *supra* note 19, at 50.

[22] Emphasis added.

[23] Emphasis added.

[24] Hemler v. Union Producing Co., 40 F. Supp. 824 (W.D. La. 1941).

[25] Lone Star Gas Co. v. Harris, 45 S.W.2d 664 (Tex. Civ. App. 1931).

title to components of the gas stream, lessors must claim that royalties paid under this clause were not intended to cover any product except fuel gas.

B. *Legal Questions*

Under leases which purport to grant only oil and gas, or oil, gas, casinghead gas, and casinghead gasoline, the question is whether helium is included in the "gas" conveyed. An inclusion of "all other minerals" in the conveyancing clause raises the question whether the *ejusdem generis* rule of construction will allow coverage of non-hydrocarbon gases. When the parenthetical phrase "(whether similar or dissimilar)" is also included, there should be no dispute over the ownership of any mineral products.

In most instances of incidental product litigation the realities suggested by two alternative inquiries would resolve the ultimate question of ownership. Crucial to a determination that title remains in the oil and gas lessor is the answer to the question what obligations, if any, owners of the working interest have with respect to development and marketing. If the disputed substances can be developed without interfering with operations for the primary minerals, or if the lessees are under either express or implied duties to develop incidental products, no loss of mineral resources would result from a holding that the lessors do not have title. On the other hand, if the converse of either is true, such a determination would be harmful to the economic interests of all parties and to the policy of encouraging development of natural resources.

The second inquiry determinative of the ownership issue concerns the question of fair compensation. If a holding that title has passed would result in little or no compensation to lessors and large profits to lessees, such a holding would be undesirable. If, however, under the instruments a fair amount in additional compensation would accrue to lessors upon extraction and sale of the incidental products by lessees, there would be little reason for holding that such substances were not conveyed.

Courts, in their attempts to settle the ownership of gas stream components, can look to previous case law relating to incidental products, statutes defining products and setting out what is conveyed by leases and deeds of minerals, and certain rules of construction applicable to oil and gas leases. The remainder of this comment examines these sources of oil and gas law, emphasizing considerations of particular importance to the question of helium ownership.

II. PRESENT STATE OF THE LAW REGARDING INCIDENTAL PRODUCTS

A. *Case Law*

1. *Mineral Deed Cases*

There are several lines of case law which might be considered sufficiently analogous to be decisive. One of these involves the question whether oil and gas are included in a deed of "minerals." The weight of authority is that a deed of "minerals" does include oil and gas unless other language in the instrument restricts the definition,[26] al-

[26] 1 Williams & Meyers, Oil and Gas Law § 219.1 (1962).

though in the true sense, oil and gas are not minerals, being of biological origin.[27] Some courts which have adopted this view, however, distinguish situations in which, at the time of the conveyance, oil and gas were not known to exist in the area or their value was not then known.[28]

In a substantial minority of jurisdictions it has been held that a grantee under a deed of "minerals" does not have the right to extract oil and gas from the land.[29] Courts which have so held state the question this way: is the substance in question within the common and ordinary meaning of the class reserved or conveyed?[30] If not, specific intent to include the substance must be shown. These courts are concerned with the potentially broad inclusiveness of the grant and (as are some of the courts which hold oil and gas normally included as minerals) with the fact that oil and gas often are not known to exist in an area at the time mineral deeds are executed. Another factor which has led some courts to the non-inclusion holding is the difficulty often encountered in locating grantees of several mineral interests ancient in origin. If the owners of oil and gas rights cannot be located or ascertained, development is inhibited. A holding that

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[27] 2 American Law of Property § 10.6 (Casner ed. 1952).

[28] *E.g.*, Missouri Pac. R.R. v. Strohacker, 202 Ark. 645, 152 S.W.2d 557 (1941); Barker v. Campbell-Ratcliff Land Co., 64 Okla. 249, 167 Pac. 468 (1917).

[29] A recent case held natural gas not included in a clause reserving "oil, coal, fire clay and minerals of every kind and character," even though at the time the deed was executed, it was well known that natural gas was frequently found with oil. Bundy v. Myers, 372 Pa. 583, 94 A.2d 724 (1953).

[30] Dunham & Shortt v. Kirkpatrick, 101 Pa. 36 (1882).

title remains in the landowner often promotes development, since surface owners are usually much easier to find.[31]

The circumstances surrounding the mineral deed cases are not the same as those surrounding the present controversy over helium, and many of the considerations which led some courts to non-inclusion holdings in the former cases are here absent. Helium exists in the same physical state as fuel gas, while the oil and gas disputed in the mineral deed cases existed in different physical states from the hard minerals which were the primary object of the conveyances. This dissimilarity is manifested most strikingly in the manner of extraction. Helium is brought from the ground by the same means as the primary substances under oil and gas conveyances, while oil and gas require different means from those used when hard minerals are produced. A party equipped to operate for oil and gas cannot avoid bringing helium to the surface also, while a party primarily interested in hard minerals cannot, without changing methods drastically, extract substances in liquid and gaseous states. Further distinguishing the mineral deed cases is the fact that there would be no problem in locating lessee owners should the courts hold that title to helium is conveyed by leases covering "gas." Oil and gas leases are usually for primary terms[32] and thereafter only for so long as a well on the premises is producing. Thus, lessees

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[31] The public interest in development of oil and gas reserves is served by such a holding. 1 Williams & Meyers, *op cit.* supra note 26, § 219.

[32] Typically, the primary term runs for ten years, during which time the lessee has exclusive rights to explore for and develop oil and gas. Until the primary term has ended the mineral estate will not be forfeited for non-production.

are not difficult to locate, for after the primary term expires the only way they can keep the leases alive is by activity looking to production from the leased premises.

2. *"Wet Gas" Cases*

A second line of cases the courts might consider relevant is that involving condensate or drip gasoline, substances often specifically provided for by modern leases. These cases arose because some wells produce "wet gas," from which it is possible to manufacture gasoline. As with the mineral deed problem, courts have split on whether all condensate or drip gasoline passes to gas lessees. Some courts have considered these products constituent parts of the gas and, as such, covered by the leases.[33] The ground assigned by one court which so held was that when lessees sell the gas without extracting the gasoline, the lessors can claim a royalty only on the price received, without taking account of the value of the extractible gasoline.[34] Thus, the court reasoned, to hold that lessors own the gas only if extracted would be to make title depend on the purpose to which the gas is put. One jurisdiction has taken the position that lessors retain title to any condensate or gasoline taken from the "wet gas" before it passes through the meter, but that after metering it all belongs to the lessees.[35]

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[33] McCoy v. United Gas Pub. Serv. Co., 57 F. Supp. 444 (W.D. La. 1932); Lone Star Gas Co. v. Stine, 41 S.W.2d 48 (Tex. 1931); Blocker v. Christie, Mitchell & Mitchell Co., 340 S.W.2d 320 (Tex. Civ. App. 1960).

[34] McCoy v. United Gas Pub. Serv. Co., *supra* note 33, at 446.

[35] Mid-Continent Petroleum Corp. v. Blackwell Oil & Gas Co., 159 Okla. 35, 15 P.2d 1028 (1932); Phillips v. Henderson Gasoline Co., 101 Okla. 227, 225 Pac. 668 (1924).

Although factually the "wet gas" cases are more similar to the helium controversy than are the mineral deed cases, they, too, ought not to be controlling. Again the situations are distinguishable. The primary substances and the incidental products involved in the "wet gas" litigation were all hydrocarbons. The helium dispute centers on an incidental product which is not a hydrocarbon. Another distinction is significant. The physical state of the incidental product involved in "wet gas" litigation is liquid when brought to the surface, while the primary substance contemplated by the such leases is gaseous. Helium, however, is gaseous both in place and when brought to the surface, as is the fuel gas contemplated by the leases. The first of these distinguishing features supports the contentions of lessors that helium was not conveyed; however, the second argues in favor of the claims of lessees.

3. *Casinghead Gas Cases*

The strongest authority for lessors' claims to helium and other non-hydrocarbon gases is found in the Oklahoma casinghead gas cases. It has been held by the Supreme Court of Oklahoma that casinghead gas, when not contemplated by the parties at the time the lease is executed, remains the property of the lessor.[36] This holding is based on a finding that casinghead gas is neither oil nor gas within the contemplation of a lease which makes no reference to it. In the first cases dealing with this problem, the Oklahoma courts held lessees to an accounting on one-eighth of the manu-

[36] The principle was first announced in Hammett v. Gypsy Oil Co., 95 Okla. 235, 218 Pac. 501 (1921). It is still the law in Oklahoma.

factured gas, not as a gas or oil royalty, but as a fair measure of damages for takings not covered by contract.[37] Later, recovery was limited to the value of the product converted, rather than a portion of the net value of the commercial product into which it was made.[38] The present standard of recovery appears to be based on the full value of all converted gas (not a fraction, as in the early cases), less reasonable and necessary production and marketing expenses.[39] The present state of Oklahoma casinghead gas law has received a mixed response. One noted oil and gas authority sees these holdings as illustrative of the modern trend as to all incidental products.[40] The results and rationale of the cases have also been severely questioned and have often been distinguished by the Oklahoma courts.[41] In several cases the Oklahoma Supreme Court has refused to hold lessees accountable for gasoline produced from casinghead gas under leases which expressly conveyed the latter substance.[42] The lessors' claims that casinghead gas was not known to be valuable for gasoline purposes

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[37] Hammett v. Gypsy Oil Co., *supra* note 36; George v. Curtain, 108 Okla. 281, 236 Pac. 876 (1925).

[38] Mullendore v. Minnehoma Oil Co., 114 Okla. 251, 246 Pac. 837 (1926).

[39] Drilling expenses and capital investment, however, may not be taken account of in the computation. Ludey v. Pure Oil Co., 157 Okla. 1, 11 p.2d 102 (1931).

[40] Merrill, *Covenants Implicd in Oil and Gas Leases* 198-200 (2d ed. 1940).

[41] See Brown, *Oil and Gas Leases* 103-04 (1958). In Broswood Oil Co. v. Sand Springs Home, 178 Okla. 550, 62 P.2d 1004 (1936), the Supreme Court of Oklahoma, though adhering to the principle of the *Hammett* case (because it was firmly established), declared that *Hammett* had been wrongly decided and that casinghead gas was a component of oil.

[42] Mussellem v. Magnolia Petroleum Co., 107 Okla. 183, 231 Pac. 526 (1924) *accord,* Wilson v. King Smith Ref. Co., 119 Okla. 256, 250 Pac. 90 (1926); *cf.* Application of Martin, 321 P.2d 659 (Okla. 1956).

at the time the leases were executed was deemed irrelevant by the court, which held that by conveying the gas the parties included the extractible gasoline. The distinguishing features adopted are the time and manner of separating the incidental product from the primary substance; that is, casinghead gas is by nature separated from the oil at the well-head, while casinghead gasoline is separated by a manufacturing process off the leased premises. It should be noted that this difference is also relevant to gaseous non-hydrocarbons which come from the well in a coadunated stream with fuel gas and must be separated off the leased premises.

Other jurdisdictions, notably Texas, have held that casinghead gas is included in a lease of oil and gas.[43] Originally, Texas allowed lessors royalties for the manufactured casinghead gasoline under the oil royalty clauses of their leases, the theory being that casinghead gasoline was in fact oil.[44] Subsequent cases, however, have disallowed any royalty for the gasoline (unless expressly covered in the lease) and have restricted recovery to payment for the casinghead gas under the gas royalty clause.[45] In a leading case the court explained this result by saying, "Such recovery would be in the nature of a double recovery for an element

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[43] Gilbreath v. States Oil Corp., 4 F.2d 232 (5th Cir.), *cert. denied*, 268 U.S. 705 (1925); Wemple v. Producers' Oil Co., 145 La. 1031, 83 So. 232 (1919); Reynolds v. McMan Oil & Gas Co., 11 S.W.2d 778 (Tex. 1928).

[44] Reynolds v. McMan Oil & Gas Co., *supra* note 43.

[45] Lone Star Gas Co. v. Harris, 45 S.W.2d 664 (Tex. Civ. App. 1931); *cf.* Southland Royalty Co. v. Pan Am. Petroleum Corp., 354 S.W.2d 184 (Tex. Civ. App. 1962).

of gas theretofore sold in its entirety, together with the right of disposal."[46] This principle was reaffirmed in a recent case involving distillate produced from a gas well.[47]

At the present time under Texas law there is no restriction on the use of gas by lessees once they have bought and paid for it, and no additional royalty exposure arises from new, more profitable uses. The case law of Texas also establishes a conclusive presumption that parties to a contract know and understand its subject matter.[48] Thus, parties to a lease of "gas" would be presumed to know the content of that gas, and if it contained a fractional amount of helium this presumption might logically give rise to another—intent to convey the helium. Language in the Texas cases referring to constituent elements appears to be broad enough to include gaseous non-hydrocarbon products.

Again, although the casinghead gas cases might be helpful to the courts in determining title to helium, it would be more advisable for them to chart an independent course, rather than to view these cases as controlling.[49] Determination of modern problems should not turn on old principles developed under dissimilar circumstances.

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[46] Lone Star Gas Co. v. Harris, *supra* note 45, at 667.

[47] Southland Royalty Co. v. Pan Am. Petroleum Corp., 354 S.W.2d 184 (Tex. Civ. App. 1962).

[48] "In the absence of fraud, accident or mistake, it will be conclusively presumed that the parties to a contract were familiar with and understood the subject-matter about which they have contracted . . . and that the terms used by them were intended to be given their ordinary and popular meaning." Magnolia Petroleum Co. v. Connellee, 11 S.W.2d 158, 159 (Tex. 1928).

[49] For an opposing view, see Holland, *Is Helium Covered by Oil and Gas Leases?*, 41 Texas L. Rev. 408 (1962).

The history of casinghead gas litigation shows that the courts have there been faced with the task of bending facts and rules of law in order to afford relief to lessors who were being grossly under-compensated by the gas payment provisions of their leases.[50] Old leases typically provided only small, flat-sum payments to lessors for gas when it was used off the premises. This resulted from the fact that when the leases were drawn up, gas was an unwanted nuisance product. When gas became more valuable and casinghead gas became productive of liquids having a market comparable to crude oil, there was such a difference in the respective amounts realized by lessors and lessees that the former began to search for ways and means to remedy the situation. In that search they were aided by sympathetic courts who put strained interpretations on royalty clauses in order to allow lessors to realize at least a portion of the vastly increased value of gas and its incidental products.

It would not be difficult for the courts to avoid these precedents and to strike out on a new course with gaseous-contained elements such as helium, for the physical facts and economic circumstances are quite different from those which were important in the casinghead gas cases. Helium has the same physical state as the primary product of the well—a gas—while casinghead gas comes from a well

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[50] See generally Brown, *op. cit. supra* note 41, at 103-04. A holding that helium is covered by a conveyance of "gas" does not create the same hazard of under-compensation. Extractible helium enhances the value of the gas stream, and the dollar amount of the lessors' fractional interest rises proportionately.

whose primary product is in a liquid state.[51] Casinghead gas, because it comes from the well separated from the oil, can be independently dealt with by lessors on the leased premises, while helium and other gaseous products of gas wells are not separated from the gas by nature, but must be separated artificially at some central point along the transmission lines. It may well be impossible to "produce, save and take care of" the fuel gas (as leases require of lessees) without saving and taking care of the helium constituent. This is the same physical fact noted earlier which has led the Oklahoma courts to distinguish their earlier holdings.[52] The manner of measurement provides another distinguishing feature. Casinghead gas can not be measured by the same means as oil from the same well; the former must be metered, while the latter is measured by the barrel. Helium and fuel gas must both be metered, and they are measured in thousand-cubic-feet units (Mcf's). Finally, under-compensatory, flat-fee payments do not appear in modern leases,[53] and thus the economic imbalance which influenced many of the casinghead gas decisions is not present.

B. *Statutes*

Various state statutes might also be considered by the courts; however, only North Dakota attempts to set out

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[51] Helium, in fact, is the most difficult of all elements to liquify. Chopey, *Liquid-Helium Plant Tackles Gas That's Hardest of all To Liquify,* Chemical Engineering, Oct. 1962, p. 76.

[52] See cases cited note 42 *supra.*

[53] Only leases executed prior to the 1920's contain flat-fee gas clauses; thus the vast majority of leases should be considered "modern." Almost all lands covered by the old leases have been depleted and are not involved in present-day oil and gas litigation.

definitively what passes under a mineral lease. A statute of that state provides that "No lease of mineral rights . . . shall be construed as passing any interest to any minerals except those . . . set forth by name in the lease."[54] A subsequent sentence qualifies the strict rule so that by-products of any named mineral and, with oil and gas, all associated hydrocarbons in either liquid or gaseous state are deemed included in the grant.[55] It seems this statute would exclude helium and other non-hydrocarbons when they are not named in an oil and gas lease; however, they might conceivably be considered included as by-products of the named minerals.

A Texas statute which defines gas wells might be of some help to the courts of that state when they deal with a royalty clause covering "gas from a gas well only."[56] The statute, however, defines a gas well in terms of proportionate production of natural gas and oil, and it is not concerned with components of the gas stream. An Oklahoma statute defines "gas" to be "all natural gas, including casinghead gas, and all other hydrocarbons not defined as oil . . . ."[57] It might be argued that this statute impliedly, if not expressly, excludes all non-hydrocarbon substances, but the phrase "all natural gas" would seem to allow a broader reading. No reported case has dealt with this problem under any of these statutes.

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[54] N.D. Cent. Code § 47-10-24 (1960).

[55] "For the purpose of this paragraph any mineral so named shall be deemed to include the by-products of such mineral and in the case of oil and gas, all associated hydrocarbons produced in a liquid or gaseous form so named shall be deemed to be included in the mineral named." *Ibid.*

[56] Tex. Rev. Civ. Stat. art 6008, § 2(d) (1948).

[57] Okla. Stat. tit. 52, § 86.1(f) (1961).

C. *Rules of Construction*

1. *Intent of the Parties*

Besides case law and statutes, the courts are likely to look to certain rules of construction in their attempt to settle the question of title to helium. As is usually said that the primary object of all rules of interpretation and construction is to arrive at and give effect to the mutual intent of the parties as expressed by their contract,[58] the courts try to place themselves in the position of the parties at the time the contract was entered into and discover what coverage they intended.[59] Before extrinsic evidence of the intent of the parties may be admitted, however, it must first be determined that the language of the contract is ambiguous.[60] It is difficult to predict what language is sufficiently ambiguous to justify introduction of parol evidence.[61] Buttressing the intent of the parties rule in Oklahoma is a statute which provides that a contract extends only to those things concerning which it appears the parties intended to contract, no matter how broad its terms may be.[62] This statute would seem to make it very difficult to argue that a substance has been impliedly conveyed. Nonetheless, it has not prevented Oklahoma courts from holding that casinghead gasoline is conveyed by a grant of casing-

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[58] See Glassmire, *op. cit. supra* note 17, at 171; Annot., 82 A.L.R. 1304 (1933).

[59] Carder v. Blackwell Oil & Gas Co., 83 Okla. 243, 201 Pac. 252 (1921).

[60] It has been held that a grant of "all Minerells Paint Rock &c" is not ambiguous, and that oil and gas are included in such a conveyance. Anderson & Kerr Drilling Co. v. Bruhlmeyer, 134 Tex. 574, 136 S.W.2d 800 (1940).

[61] In Oklahoma a lease which has terms with accepted meanings is not considered ambiguous. Carroll v. Bowen, 180 Okla. 215, 68 P.2d 773 (1937).

[62] Okla. Stat. tit. 15, § 164 (1961).

head gas, even when there is no evidence that the parties contemplated it at the time the lease was executed.[63]

The courts have looked for specific intent to convey the particular elements in question.[64] If, in the case of helium, they search for such intent, it is likely they will be forced to decide that helium and other non-fuel components of the gas stream are not included in the grant. However, the use of the specific intent test to determine the disposition of substances unknown at the time the contract was entered into, or known substances considered to have no intrinsic value at that time, is subject to criticism.[65] This is especially true when the parties to a lease probably had no intent at all as to the substance in question, and, had they contemplated the problem, would have either specifically dealt with it or would have considered the elements covered by other terms of the instrument.[66] While the intent test ought not to be abandoned, it should be modified so that the search is for *general* intent, rather than a supposed, but unexpressed, specific intent. This general intent should be discovered not by defining and redefining the terms used, but by considering the purposes of the grant in terms

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[63] See note 39 *supra* and accompanying text.

[64] See generally Kuntz, *The Law Relating to Oil and Gas in Wyoming*, 3 Wyo. L.J. 107 (1949).

[65] See generally 1 Williams & Meyers, *op. cit. supra* note 26, § 219. *But cf.* Holland, *supra* note 49, at 418-19.

[66] When extrinsic evidence is allowed in the search for intent, it may relate to such matters as the following: (1) the normal business activities of the party claiming to be the owner, (2) whether at the time of the conveyance commercial quantities of the disputed substance were known to exist in the area, (3) whether prior or contemporaneous instruments executed by the parties or by either of them were more specific as to the disputed substance. 1 Williams & Meyers, *op. cit. supra* note 26, § 219.5.

of respective manner of enjoyment of surface and mineral estates.

Applying this suggested general intent test to the problem of contained gaseous elements, it should probably be assumed that the parties intended to dispose of all elements that come from the well in a gaseous state by providing for "gas." The grant would be construed to convey all gaseous substances presently valuable, whether their presence is known or not, as well as all gaseous substances which subsequently become valuable. This result would be reached because the general intent of the parties was that the lessee's estate should consist of the right to drill for and take all substances which are metered at the surface and that the estate reserved to lessor should consist of enjoyment of the surface, all hard minerals, and whatever liquids are not conveyed by other terms of the lease. A general intent test probably conforms more closely to the original intention of the parties than does the test of specific intent, and it has the further advantage of achieving certainty. Discovery of new substances, valuable in themselves, would not serve to "expand the grant," but would only make more certain the specific object of a general grant.

In relation to the question of intent of the parties, it has been suggested that under a lease having a "free gas" clause, helium is probably not granted.[67] This conclusion rests upon the supposition that, since helium is not useful as a fuel gas, the parties could not have intended that the gas contracted for should include helium. If helium occurred in

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[67] Holland, *supra* note 49, at 413.

nature as the major product of certain gas wells that conclusion would be sound; however, helium occurs only as a very minor component of natural gas wells. It does not necessarily follow that, by providing for free gas, lessors intend to exclude from the grant all minor non-combustible components of the gas stream, for over the years of their leases many lessors have accepted the natural gas as it comes from the ground, including all impurities, as free gas.

2. *Realistic Construction*

A second applicable rule of construction is that a realistic, rather than an unrealistic, interpretation should be given where such interpretation will make the lease lawful, operative, definite, reasonable, and capable of being carried into effect.[68] Lessors almost never claim title to by-products until they become valuable and extraction begins, and then they claim only the particular substance being extracted and sold. With a substance such as helium they place themselves in a situation whereby they seek to except an element they can not drill for and produce themselves. To accept such a claim would be to place upon a lease an unrealistic construction, which would make it inoperative rather than operative. Lessees, on the other hand, owning the dominant estate when the purpose is to mine for and produce oil and gas, can realistically claim title to component gases and produce or extract them.

Where the lease in question provides for royalties on

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[68] Diggs v. Cities Serv. Oil Co., 241 F.2d 425 (10th Cir. 1957); Clymore Prod. Co. v. Thompson, 13 F. Supp. 469 (W. D. Tex. 1936); Mussellem v. Magnolia Petroleum Co., 107 Okla. 183, 231 Pac. 526 (1924).

gas when it is from a well where "gas only" is found, it would seem that the courts should also apply this rule of construction. Under such a lease the lessors' contentions that non-hydrocarbon gases are not included in a lease of "gas" would, if successful, take the wells out of the royalty clause covering wells where "gas only" is found. The result would be that lessees could take the fuel gas, since the conveyancing clause clearly grants it, but they would be under no obligation to pay royalty on it since it would not be from a "gas only" well. Application of the rule of realistic construction would probably lead to the inclusion of non-hydrocarbon gases in both the conveyancing and royalty clauses, thus preventing this absurd and inequitable result.

3. *Other Applicable Rules of Construction*

Contrary to the rule applied to ordinary leases, oil and gas leases, when ambiguous, are construed against lessees and in favor of lessors.[69] If a lease of "gas" is considered ambiguous as to coverage of non-hydrocarbon gases, a court applying this rule would determine the controversy in favor of lessor. Three reasons have been assigned for the rule: (1) the moving consideration for the lease is the immediate development of lessor's premises, (2) the lease contract is prepared and submitted by the lessee, and (3) the fugitive nature of oil and gas presents the hazard of drainage.[70]

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[69] Beatty v. Baxter, 208 Okla. 686, 258 P.2d 626 (1953). In the construction of mineral deeds, however, the general rule applied to land grants (construction in favor of grantees) has been adopted. Glassmire, *Oil and Gas Leases and Royalties* 171 (2d ed. 1958).

[70] Veasey, *The Law of Oil and Gas,* 18 Mich. L. Rev. 652 (1920).

The rule has often been criticized as illogical and unwarranted under modern conditions.[71] The first basis for the rule is no longer valid, for under modern leases bonuses and delay rentals are provided which often replace prospective royalties as the major inducement for the execution of leases. Also, modern lease forms are standardized, and the usual terms are a matter of common knowledge, especially among landowners in petroleum producing regions. It has been said that the average landowner in oil and gas regions is unusually well-informed regarding the terms and conditions of oil and gas leases, as well as the usages of the business.[72] The drainage problem can be dealt with by reading in an implied covenant to protect from drainage. Despite criticism, however, courts have continued to construe ambiguous oil and gas leases against lessees, so it appears the only way in which lessees can avoid the sometimes harsh results arrived at is to argue the absence of ambiguity.

The *ejusdem generis* rule of construction is often applied in connection with those leases which purport to grant "other minerals" without attaching the parenthetical "(whether similar or dissimilar)."[73] In applying the rule however, there arises a problem of determining which respective characteristics of fuel natural gas and helium should be considered controlling. There are at least five categories: (1) physical state—both gaseous; (2) chemical content—hydrocarbon vis-a-vis inert gas; (3) end use—

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[71] See Glassmire, *op cit. supra* note 69, at 171-72; Veasey, *supra* note 70.
[72] Glassmire, *op. cit. supra* note 69, at 172-73.
[73] See Wolf v. Blackwell Oil & Gas Co., 77 Okla. 81, 186 Pac. 484 (1920).

fuel and energy as proposed to others; (4) manner of extraction from the ground—drilling of wells in both cases; and (5) manner of measurement—both measured in Mcf's by metering. A court might require that a disputed substance be identical with fuel natural gas in all of these characteristics, and in such case helium and many other components of the gas stream would not be held to have been conveyed under the "other minerals" clause. The most important characteristics would seem to be physical state, end use, and manner of measurement. On the basis of helium's likeness to fuel gas in two of these respects—physical state and manner of measurement—one commentator has concluded that it and like substances would pass by the clause.[74]

A final rule of construction especially applicable to the problem of determining coverage of oil and gas leases is that where the parties to a contract have given it a practical construction by their conduct, such construction is entitled to great weight in determining its proper meaning.[75] While this rule has general acceptance, it is impossible to say with certainty what acts of the parties may be held to effect a practical construction of the lease. The rule might be applied to royalty payments and their acceptance under the gas royalty clause. If the gas stream has consisted in part of non-hydrocarbon gases ever since production began, and the lessor has accepted royalty for many years on the full

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[74] Glassmire, *op. cit. supra* note 69, at 295.

[75] Lambertz v. Builders, Inc., 183 Kan. 602, 331 P.2d 559 (1958); Tate v. Stanolind Oil & Gas Co., 172 Kan. 351, 240 P.2d 465 (1952); Superior Oil Co. v. Stanolind Oil & Gas Co., 150 Tex. 317, 240 S.W.2d 281 (1951).

stream as metered, a court could conceivably hold that the parties have construed the lease by their conduct and that by mutual understanding the term "gas" in the royalty clause covers all substances coming from the well in gaseous form.[76]

III. Suggested Controlling Considerations

There is a distinct necessity for the courts to settle upon a definite and generally applicable answer to the question of title to natural gas stream components.[77] Past litigation dealing with what is included in a deed of minerals or a lease of oil and gas has not produced any general principles which can be applied with certainty,[78] and the resulting uncertainty naturally causes reluctance upon the part of either party to a lease or deed to invest in the expensive equipment required to extract from the gas stream such valuable elements as helium. Delay bred by this uncertainty causes huge quantities of such components to be lost irretrievably each day.

Contributing to the uncertainty is the confusion that exists in many jurisdictions as to the question of the lessees' duty to produce and market incidental products. There is a general implied obligation imposed upon every lessee, in the absence of stipulation otherwise, to develop the premises with reasonable diligence;[79] however, this obligation might

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[76] *Cf.* Lackey v. Ohio Oil Co., 138 F.2d 449 (10th Cir. 1943); Southland Royalty Co. v. Pan Am. Petroleum Corp., 354 SW.2d 184 (Tex. Civ. App. 1962). The four corners rule would extend the construction to the conveyancing clause. See text accompanying note 21 *supra.*

[77] See generally I Williams & Meyers, *op. cit. supra* note 26, § 219.

[78] Walker, *Defects and Ambiguities in Oil and Gas Leases,* 28 Texas L. Rev. 895, 899 (1950).

[79] Texas Pac. Coal & Oil Co. v. Barker, 117 Tex. 418, 6 S.W.2d 1031 (1928); Glassmire, *op. cit. supra* note 69, at 244.

only apply to the primary products contemplated by the lease. Some early Texas casinghead gas cases seemed to indicate that lessees were under a duty to manufacture casinghead gasoline.[80] That conclusion was reached, in part, because of the holding that casinghead gasoline was oil, and the duty was confused with the duty to develop and market oil under the lease. Later Texas cases repudiated the implied duty to extract gasoline and held that lessees are not obligated to extract it.[81] It has been suggested that there is a duty to develop newly discovered minerals unless the lease contains a "one-mineral" clause and the particular product is shown to have been within the contemplation of the parties.[82] It is doubtful, however, that any court would extend this obligation to require lessees to transport the raw gas stream off the leased premises and to erect and operate at great expense a plant to extract components, unless by such activity the lessee would realize a profit above investment and operating expenses.[83] Above all, the determination of the duty question should not rest solely on the characteristics of the particular substance in question, for the future development of other elements and compounds may

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[80] See Hardwicke, *Evolution of Casinghead Gas Law*, 8 Texas L. Rev. 1, 29 (1929).

[81] Lone Star Gas Co. v. Stine, 41 S.W.2d 48 (Tex. 1931); Humble Oil & Ref. Co. v. Poe, 29 S.W.2d 1019 (Tex. 1930); Lone Star Gas Co. v. Harris, 45 S.W.2d 664 (Tex. Civ. App. 1931); *accord*, Maddox v. Texas Co., 150 F. Supp. 175 (E.D. Tex. 1957).

[82] Merrill, *op. cit. supra* note 40, at 200-01; Merrill, *Lease Clauses Affecting Implied Covenants*, 2 Institute on Oil and Gas Law and Taxation 141 (1951).

[83] *Cf.* Matzen v. Hugoton Prod. Co., 182 Kan. 456, 321 P.2d 576 (1958); Empire Gas & Fuel Co. v. Haggard, 152 Okla. 35, 3 P.2d 675 (1931); Hardwicke, *supra* note 80, at 29.

depend upon the solution the courts apply to the helium controversy.

If a court implies a duty to extract components of the gas stream, it probably must continue to restrict its holdings to the particular elements in question. An "across the board" duty to extract would carry the potential of great inconvenience and expense to lessees and would also lead to future litigation concerned with the circumstances under which the duty arises. A duty to extract limited to the elements litigated, on the other hand, would do nothing to cure the problem of waste associated with uncertainty of ownership and duty to develop. It seems that it would be more desirable to insist that the duty to market be confined to the product in the state in which it is produced at the well, and not include any duty, at lessees' sole expense, to increase its value by processing.[84]

Some lease forms have attempted to deal with this problem. One such form gives lessees the option to develop new products and provides that lessors can require development by giving notice. If, after notice, the lessee decides against developing the newly discovered mineral, he must surrender to lessor the right to such mineral. This form, though it is preferable to having the situation left completely untouched by the lease, presents some problems of its own, for an element such as helium can not be effectively exploited

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[84] This follows, since the well-head is the point at which the gas is "captured" and metered, title vests, and lessee's royalty obligation is measured. See Siefkin, *Rights of Lessor and Lessee With Respect to Sale of Gas and as to Gas Royalty Provisions,* 4 Institute of Oil and Gas Law and Taxation 181, 184-201 (1953).

apart from operations for gas. Also, when waste is imminent, the option period[85] is harmful to the interest of lessors.

Besides the economic interests of lessors and lessees, the national need for the extraction of otherwise wasted products should be given consideration. A component such as helium is strategic to the nation's security, and, due to the enormous daily waste, the time factor is crucial.[86] Certainty, achieved by setting out generally applicable principles, would encourage faster development of extraction apparatus in the future, as other components of either oil or gas streams become valuable. The national interest would also be best served by a holding in favor of the party best able to develop the component elements, especially since the duty question remains unsettled. Usually the party best able to establish extraction processes would be the lessee.

The enormous initial expense required to construct a cryogenic extraction process would make it virtually impossible for an individual landowner to extract gaseous elements; thus, some sort of cooperative effort among lessors would be required. Such cooperative action might well come in conflict with the antitrust laws of either state or federal governments. Texas statutes deal expressly with the rights of landowners to unitize.[87] These statutes require certification by the Railroad Commission before construction and operation of facilities for conserving and utilizing gas, in-

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[85] After receipt of notice the lessee is given an option period (typically twelve months) during which time he may decide whether or not he will develop the product.

[86] Letter from Secretary Udall to FPC Chairman Joseph C. Swidler, Dec. 10, 1961; see text accompanying notes 5-11 *supra*.

[87] Tex. Rev. Civ. Stat. art. 6066c (1948).

cluding facilities for extraction, and approval is forbidden unless the arrangement is in the interest of conservation. Agreements for cooperative marketing of crude petroleum, condensate, distillate, gas, or any by-products are prohibited. Extraction facilities for helium would qualify for approval, since such extraction is certainly in the interest of conservation. The marketing problems associated with helium, however, might require the prescribed cooperative action. The validity of unitized operations under federal antitrust laws has been the subject of much speculation; however, there have been no reported cases dealing specifically with the problems presented by contained gaseous elements.[88]

Several other considerations lead to the conclusion that it would be preferable for the courts to hold that components of a gas stream are all granted by a lease of "gas." First, a holding that such elements are not covered would result in non-recovery for some owners within unitized tracts and disproportionately large recoveries for other unitized owners. Unitization agreements normally do not deal specifically with component elements; thus, only those landowners having producing wells on their premises would be entitled to recover for converted by-products under the rule of capture.[89] This would be the case even though it is likely such land owners might believe themselves fully unitized by providing for pooling of gas, oil, casinghead gas, and casinghead gasoline. A holding that non-hydrocarbon components are

[88] See generally Hardwicke, Antitrust Laws et al. v. Unit Operation of Oil or Gas Pools (rev. ed. 1961); Searls, *Antitrust and Other Statutory Restrictions of Unit Agreements,* 3 Institute on Oil and Gas Law and Taxation 63 (1952).

[89] *Cf.* Glassmire, *op. cit. supra* note 69, at 107.

not granted by the leases would defeat their intent and purpose.

Second, even if a court adheres to the specific intent test instead of adopting the suggested test of general intent,[90] a holding that helium is conveyed to leases is not precluded. The gaseous state in which helium remains when brought to the surface makes it difficult to store and transport. These are the two characteristics which give rise to the gas royalty and shut-in well provisions of modern leases; thus, it would seem that helium is the type of substance clearly contemplated by the gas clauses. Also, most of the elements have been known to be present in natural gas streams for many years. Helium, for example, was discovered to be a fractional component of some natural gas wells in 1905,[91] and Congress in the Mineral Leasing Act of 1920,[92] provided for the reservation to the federal government of helium processing rights on public domain lands. Parties who entered into gas leases after 1905 (and certainly those who entered into such leases after 1920) may be presumed to have known that helium was included in the gas stream. To claim an exception or reservation of helium, they should be required to exhibit specific language in the lease indicating that such was the intent.

Third, the primary object of natural gas leases is the production of fuel gas,[93] and the owner of the gas rights therein

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[90] See text accompanying notes 63-67 *supra.*

[91] Seaton, *The Challenge of Helium Conservation,* 8 Bus. Topics (Mich.), Spring, 1960, p. 21, 22.

[92] 41 Stat. 437 (1920), as amended, 30 U.S.C. § 181 (Supp. IV, 1963). See also Hoffman, Oil and Gas Leasing on the Public Domain 33 (1951).

[93] Glassmire, *op. cit. supra* note 69, at 170.

has the dominant estate. The right to take natural gas carries with it the right to bring to the surface as much of the other gaseous elements as is necessary and proper,[94] since no method has yet been devised for separating the gases in place. The general rule is that one who owns the minerals or mineral rights in land has, as incidental to that ownership, the rights and privileges necessary for the profitable production of such minerals.[95] The broad extent of application of this rule is illustrated by an early Pennsylvania decision disallowing an action of trover for petroleum which had risen naturally with water from salt wells on land leased for the manufacture of salt.[96] After it had reached the surface, the petroleum was separated from the salt water and sold by the lessee. Though the grant did not include petroleum, the court stated that, since lessees could not raise the water without raising the petroleum, severance of the oil as an inevitable incident to the grant was lawful, as was lessees' possession of it after it reached the surface.[97]

Finally, the relative equities of the parties dictate a conclusion that lessees are the rightful owners of gas stream components.[98] If the Oklahoma casinghead gas decisions

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[94] Guffy v. Stroud, 16 S.W.2d 527 (Tex. 1929) (dictum).

[95] Holt v. Southwest Antioch Sand Unit, Fifth Enlarged, 292 P.2d 998 (Okla. 1955) (lessee may take salt water from secondary recovery of oil); B. L. McFarland Drilling Contractor v. Connell, 344 S.W.2d 493 (Tex. Civ. App.), *rev'd on other grounds,* 162 Tex. 345, 347 S.W.2d 565 (1961) (oil and gas lessee may take *caliche*); Stradley v. Magnolia Petroleum Co., 155 S.W.2d 649 (Tex. Civ. App. 1961) (water may be taken to assist drilling operations).

[96] Kier v. Peterson, 41 Pa. 357 (1862).

[97] The court further stated: "[I]t must belong to the lessee, who must separate it from the salt, and either let it run to waste or prepare it for the market." *Id.* at 362.

[98] See generally Walker, *The Nature of the Property Interests Created by an Oil and Gas Lease in Texas,* 10 Texas L. Rev. 291 (1932).

are followed,[99] the result in the case of helium will be substantial unfairness to lessees. Though the courts in the casinghead gas cases allowed lessors to recover in the amount of the market value of all casinghead gas rather than a fraction, lessees were nonetheless able to realize a profit from their extraction operations, since the value of the manufactured products was greater than the value of the crude casinghead gas at the well-head. Helium, however, can have no value at the wellhead, for it is a coadunated quantity with the fuel gas and has no market until separated. Thus, any relief afforded lessors must be based on the value of the extracted helium. If such relief is given in accordance with that allowed in the casinghead cases, no profit would be left for lessees, the parties who provide the capital for extraction apparatus. In addition, a holding that title to components of a gas stream passes to lessees under a lease of "gas" adequately protects lessors. Modern leases do not have under-compensating, flat-fee clauses;[100] thus, lessors receive a fraction of the value of the gas stream. As a practical matter, when the royalty is based on a fraction of the market value of the gas, lessors indirectly benefit from the products manufactured, since the market value or market price at the well will be greater where products can be manufactured from the stream. Lessors are indirectly paid a royalty on the products extracted because the value of such products is reflected in the price for which the gas is sold by lessees and on which the royalty is calculated.

C. Douglas Kranwinkle

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[99] See notes 36-40 *supra* and accompanying text.
[100] See text accompanying note 50 *supra*.